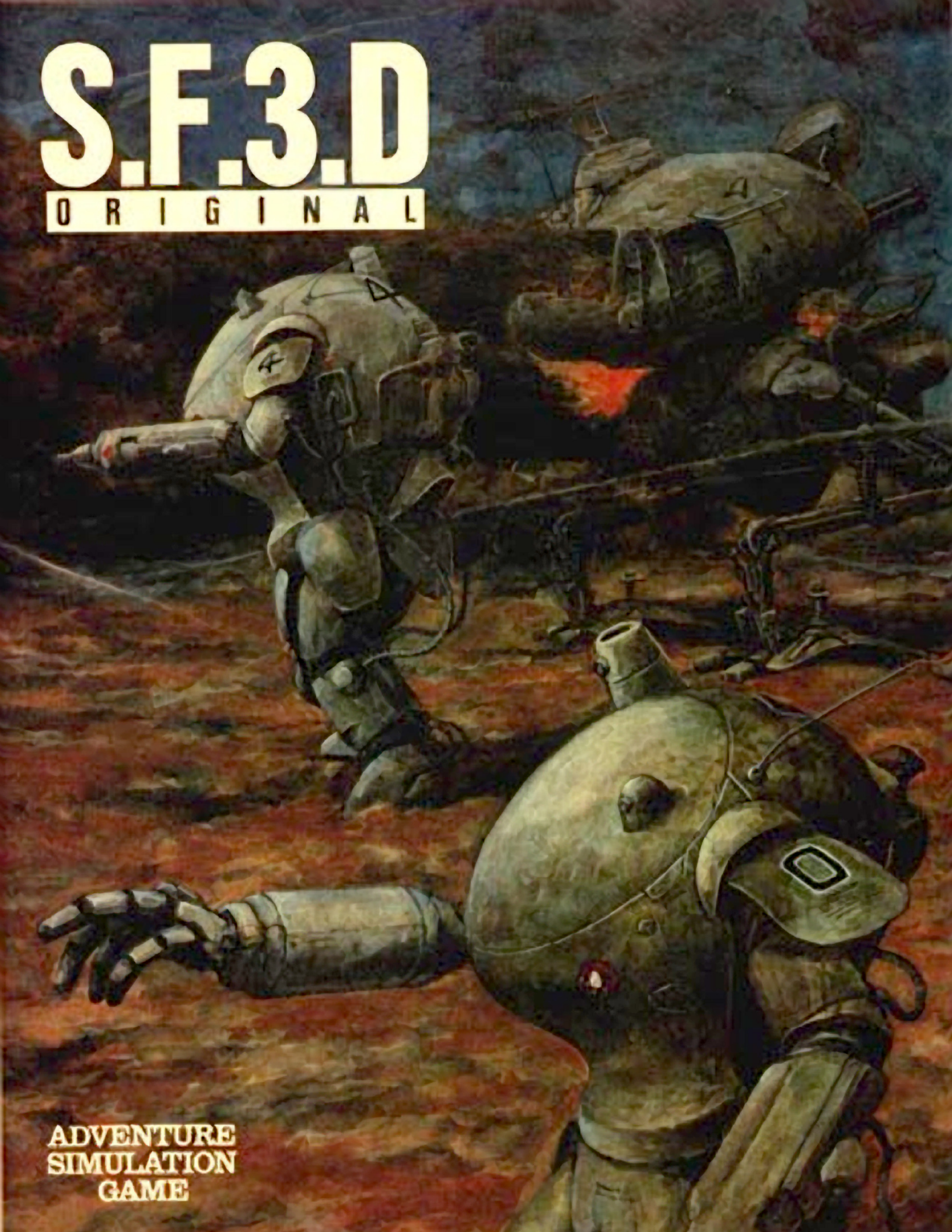
S.F.3.D

ORIGINAL



ADVENTURE
SIMULATION
GAME

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INTRODUCTION

The aim of this manual is two-fold. First, it provides a definitive translation of the advanced rules from S.F.3.D II Operation Faserei. The rules expanded the rules for the first game, with a few changes, though the rules were intended to be largely compatible. So the S.F.3.D II rules are presented as the primary rule set, with a few notes about differences between it and the original game.

The second purpose for this manual is to collect the material that appeared in various sources, including scenarios from both games, and Tactics, a Hobby Japan gaming magazine.

S.F.3.D Original and S.F.3.D II Operation Faserei set in a fictional world now known as "Maschinen Krieger ZbV 3000", or Ma.K. for short.

Setting

Following a brief, but incredibly destructive world war that employed nuclear, chemical and biological weapons, survivors were forced to leave Earth for colonies on other planets. Eventually, portions of Earth were deemed habitable again, and the planet where humanity began became a colony world. While life on Earth was initially difficult, the colony drew little attention from the Strahl Democratic Republic, which controlled the region of space it was in, and it became a popular place for mercenary veterans of various wars in the universe to take up retirement.

When the colony eventually turned prosperous, it drew the attention of the SDR, intent on enforcing their law and taxes on the colonists. It wasn't long under this new rule that the colonists rebelled. The wealthier colonists backed a military force organized by the retired mercenaries, known as the Mercenary Army.

The Strahl Troops primarily deployed air superiority fighters and unmanned tanks. Under pressure, the Mercenary Army developed armored exoskeletons, commonly known as the Armored Fighting Suit, which set off an arms race that lasted the duration of the prolonged conflict.

Tactics Magazine

Several articles about both games appeared in the pages of Tactics magazine, a publication of Hobby Japan. Rule corrections or clarifications that come from Tactics have been incorporated into the manual, and maked with a dagger (†). Unit and Reference errata can be found in sections [2.2] and [2.3].

The following is a list of known articles.

Issue/Page Article
17, p72-3 ... S.F.3.D Writeup
20, p111 ..... S.F.3.D Original Errata †
21, p22-4 ... Scenario Writeup
21, p25..... Scenario A †
21, p26..... Scenario B †
21, p27..... Scenario C †
25, p36..... Scenario Writeup
25, p36..... Tournament Scenario 100 †
25, p37..... Tournament Scenario 101 †
25, p38..... Tournament Scenario 102 †
25, p116-7.. Questions and Answers †
25, p117..... S.F.3.D II Errata †
26, p8-9 ..... S.F.3.D II Writeup
26, p116..... Questions and Answers †
27, p48..... S.F.3.D II Writeup
27, p49..... Scenario 23 †

Twentieth Century Imports

Twentieth Century Imports brought both games to the United States shortly after their release in Japan. The rules set written by TCI excludes a number of rules from the Japanese edition, in addition to changing some of the scenarios. It also adds some rules that were created by TCI. In general, the rules from one or the other should be used, but some players may find that bits from one rule set may enhance their enjoyment of the other.

Fan Expansion

Several fans of S.F.3.D and the game decided to expand on the material, creating new rules, units, and scenarios to expand the scope of the original games. While their content was written with the TCI edition in mind, the material is generally compatible with the Japanese edition. The material included here is the most complete version available.

The Naming of Things

Because of the language barrier there are several cases where the accepted name or spelling of of a name has changed over time. TCI also used some of their own terms for things. A brief guide of the most common changes or errors is provided here.

Strahl/Shuttoral/German

The Strahl Demokratische Republic, SDR, or Strahl for short is now the commonly accepted name for the Germanic-influenced government put in charge over the Earth. The TCI edition most frequently referred to them as 'Germans' and Shutoral/Shuttoral is the transliteration of the Katakana used to write the Strahl name.

Mercenaries/Australians

The Mercenary Army, composed of, and employed by the Earth colonists were referred to as Australians in the TCI edition. While Australia is one of the most significant regions on the planet, having been least effected by the prior World War, referring to the force as Mercenaries is the more common term now.

Nutcracker/N.Rocker/Nutrocker

The original name, still frequently used for this Strahl tank is 'Nutrocker', sometimes written 'NutRocker' or 'Nuts Rocker'. The original intent behind its naming was to call it the 'Nutcracker', alluding to the Mercenary AFS as the 'nuts' that would be 'cracked' by it.

Gladiator/Gradiator

This is a simple case of transposing what should be an 'l' with an 'r'. The spelling even varies in the original material quite a bit. The intent is to name it after the arena fighter, though the alternative spelling certainly sounds good too.

(1.0)

Introduction

This rulebook is a translation of the rulebook that came with the S.F.3.D II: Operation Faserei game. In turn, that work was an expansion for a prior game, S.F.3.D Original. Both games were a part of a fiction now known as Maschinen Krieger, or Ma.K. for short.

Beginners might find this game difficult to master at first. Experienced gamers will find many familiar concepts, as well as a few new ones to learn. For all levels of play the presentation of the rules might contribute to their difficulty since it will be done in the same order as the original Japanese rules.

To get started with the game, after reading through the rulebook and grasping the general outline/synopsis, it's a good idea to start with the basic scenarios (such as scenario 1).

Players who own the English release of either game might already be familiar with the rules provided by Twentieth Century Imports. This rule set attempts to be more accurate to the original material, and should be used in place of those rules.

(2.0)

Game Contents

The S.F.3.D game set includes:

• Japanese Rule Book	1
• Map Boards (1~4)	4
• Reference Card	1
• Scenario Cards (Scenarios 1~10)	5
• Air Commitment Cards	2
• Game Pieces	480
• Dice	2
• Plastic Tray	1

The S.F.3.D II game set includes:

• Japanese Rule Book	1
• Map Boards (5~7)	3
• Reference Cards	2
• Scenario Book (Scenarios 11~22)	1
• Game Pieces	480
• Dice	2
• Plastic Tray	1

The TCI editions also include English rulebooks and reference cards.

[2.1] Map Boards

The maps are marked with a number from 1 to 7. They can be placed in any combination to meet the requirements of the scenario played.

The six-sided shapes printed on the maps are 'hexes'. All measurement is counted in hexes and a unit's location and local topography are given by what is in the hex.

[2.2] Game Pieces

The processed, stamped cardboard tokens are the game pieces. They are "Units", which signify weapons in the game, and "Markers", which indicate conditions in the game.

The meanings of symbols and numerical values on the tokens are illustrated on the next page.

Units can be classified into the following three types. Unit type is important for stack restrictions [Section 8.0].

Type I	AFS type, NeuSpotter, Krachen Vogel.
Type II	All ground units other than those listed for Type I.
Type III	Flying units.

[2.2.1] Unit Errata - S.F.3.D Original

Early printings of S.F.3.D Original may have PKA tokens 29 and 30 incorrectly printed with Gustav stats on the back, and Gustav tokens 1 through 6 with PKA stats on the back. These tokens appear to have been corrected in the copies imported by TCI.

Early printings of S.F.3.D Original may have J40(S) tokens incorrectly printed with a range of 'M', it can be ignored. These tokens appear to have been corrected in the copies imported by TCI.

[2.2.2] Unit Errata - S.F.3.D II

F-boot tokens 03 and 04 should have Defense 4, Durability A.

Mercenary Inf.SQ tokens 05 through 20 should have Defense 3.

[2.3] Reference Sheets

Reference charts have been provided to smooth game play. The full contents for each scenario are included on the scenario's reference sheet.

(3.0)

About the Game

[3.1] Game Progression

The game is designed for two players, but with a little work, four people can play. Ma.K. is also suited for solo play.

There are a total of twenty-two scenarios available between S.F.3.D and S.F.3.D II. Each scenario establishes the circumstances of the battle, indicating military forces, troop set-up, and winning conditions. While most games will begin by selecting a scenario for play, it is possible to create original scenarios, using existing scenarios as reference.

The game proceeds in punctuations of time, called "turns". The game ends when the number of turns set forth in the scenario are completed. After the last turn, victory is awarded. If a win or loss becomes clear during the game, a player may abandon the game, causing it to end.

[3.2] Game Scale

The game takes place on map boards divided into "hexes". Each hex is about 80 to 100 meters across, and each turn is about 1 minute long. Most tokens represent one unit, whether it is a heavy vehicle or mobile suit. For an infantry squad, one token represents one division, about 6 to 10 people.

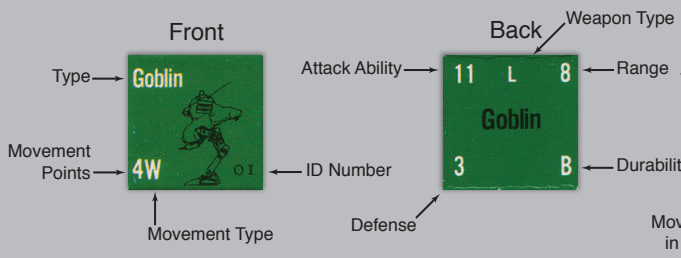
(4.0)

Sequence of Play

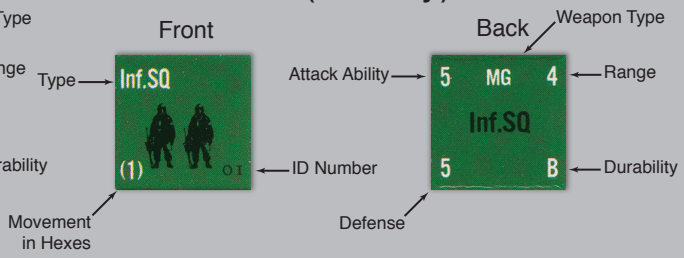
Each scenario uses a fixed number of turns. The game ends when that number of turns have been completed. Every turn consists of four phases and must proceed in the following order.

–Example–

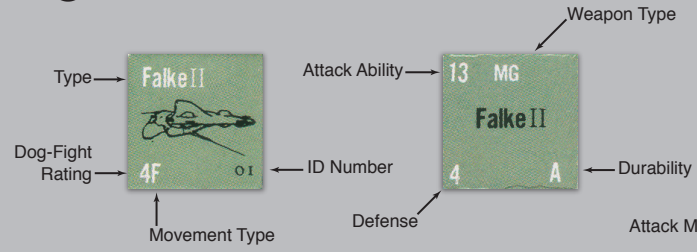
○ Ground Unit



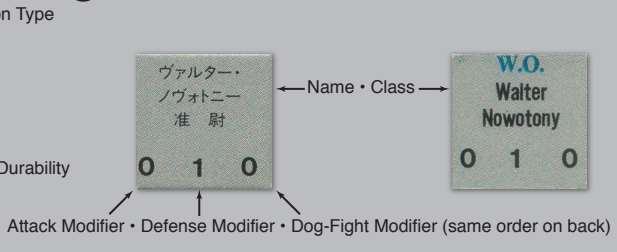
○ Ground Unit (Infantry)



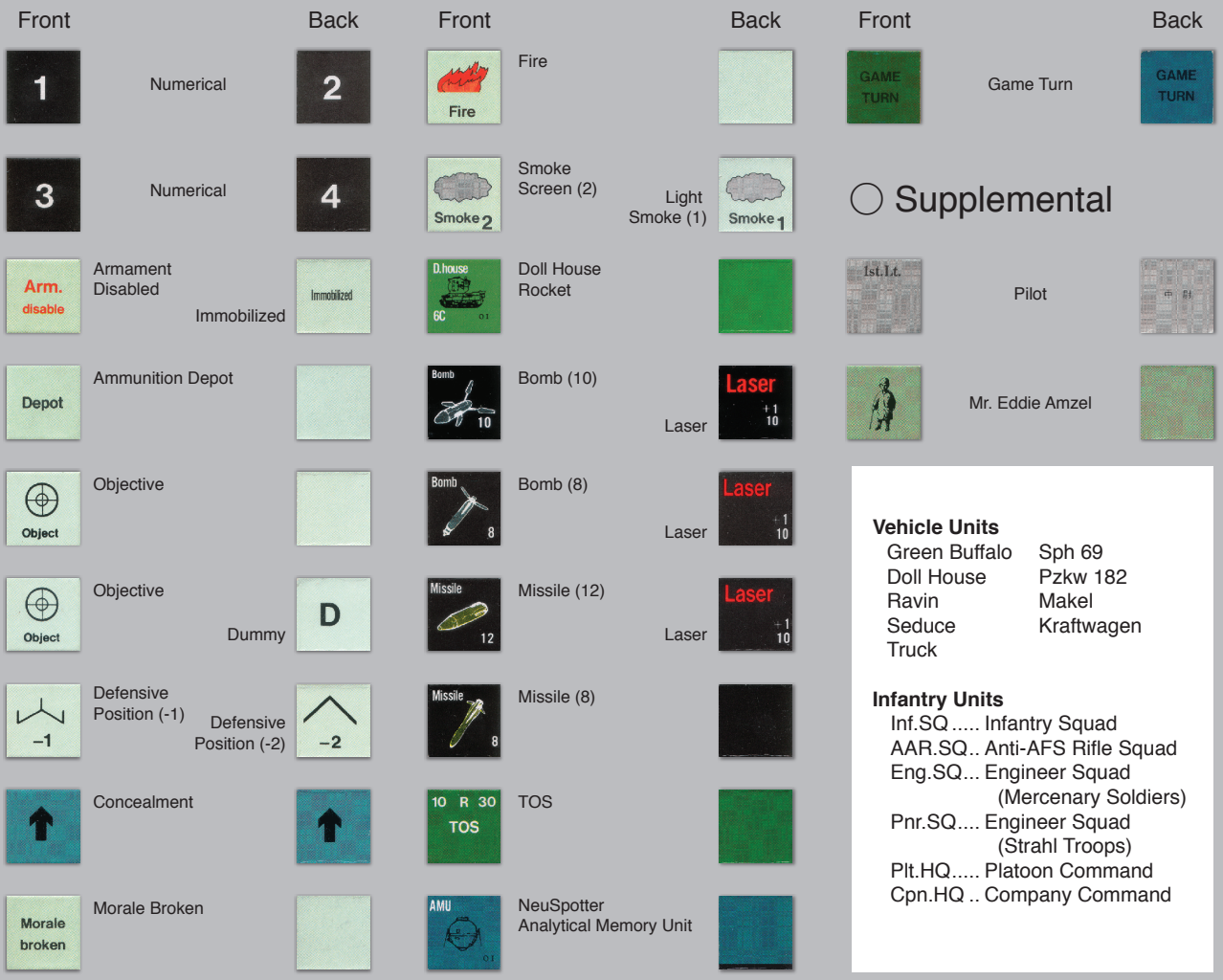
○ Air Unit



○ Pilot Unit



■ Markers



○ Supplemental

Vehicle Units

Green Buffalo	Sph 69
Doll House	Pzkw 182
Ravin	Makel
Seduce	Kraftwagen
Truck	

Infantry Units

Inf.SQ ..... Infantry Squad
AAR.SQ.. Anti-AFS Rifle Squad
Eng.SQ... Engineer Squad (Mercenary Soldiers)
Pnr.SQ.... Engineer Squad (Strahl Troops)
Plt.HQ..... Platoon Command
Cpn.HQ .. Company Command

1. Air Commitment Phase

Each player secretly divides the aerial power in hand into "Air Combat" duty or "Ground Support" duty. After the assignments have been revealed, proceed with dogfighting and, if possible, break through.

2. First Player's Phase

The first player tests the morale of infantry units and then proceeds to attack and move units. The player may proceed with with air-to-ground, ground-to-ground, or close quarters attacks, move, or do any combination of these actions. Under certain conditions the first player might receive defensive attacks from the second player. While the decision of whichunits will attack and which will move is up to the player, a single unit cannot move and attack in the same phase, with the exception of close quarters combat.

3. Second Player's Phase

This is the same as the first player's phase, but the second player is now moving and attacking, and receiveing defensive attacks from the first player.

4. End of Turn Phase

Move the turn marker one frame on the turn record chart and proceed to the next turn. When the turn specified by the scenario ends, the game will end.

Throughout these rules the term "Phase Player" is used to refer to the player whose phase it is. Their opponent is the "Anti-Phase Player".

There is no seperation of player actions during the End of Turn and Air Commitment Phases.

(5.0)

Attacking

For convenience, "attack" refers to all kinds of attacks, including close quarters, with the only exception being dog-fighting. There are two kinds of attacks, Direct Attack, which occurs when the attacker has direct line of sight to the target, and Indirect Attack, which uses spotters, so the attacker does not have to have a view of the target.

Making attacks are not required and are up to the discretion of the controlling player.

[5.1] How to Attack

[5.1.1] Attack Procedure

1. The attack is announced. The phase player decides which unit is attacking and which unit is the target (refer to [14.21] for the exception). Check that the attacking unit can see the target for Direct Attacks, or the spotter, for Indirect Attacks (consult [6.0] for rules on Line of Sight).

2. Measure the distance between the attacking unit and target in hexes. When measuring the distance, the hex the attacking unit is in is not counted (consult fig. 1). If the distance is longer than the attacking unit's shooting range, the attack does not take place.

3. Add all target modifiers to the attacking unit's attack ability (be careful that some modifiers are given as negative). Next, subtract the target unit's defense from the adjusted attack ability. The final value is the "Attack Target". When the target is below zero, the attack becomes ineffective, but in the case of lasers or machine guns, the attack roll must still be made to determine if the weapon is expended. For weapons that have a limited amount of ammunition, consider one round to have been fired.
Once the attack Target is known, the attacking player rolls two dice and adds the values. If this sum is equal to or less than the attack Target, the attacking unit hits the target. If the product exceeds the attack Target, the attacking unit misses.
Special Note: The first SF3D game rules state that the two dice rolled should be multiplied together. The second game clearly changes this resolution system to the more traditional addition.

4. If the attacking unit hits, the target unit's player checks the effect of the attack. Roll two dice and add the results. Compare the sum with the target unit's endurance level, using the armor Endurance table.

[5.1.2] Attack Results

The attack results obtained from the armor Endurance chart can be of the following three types:

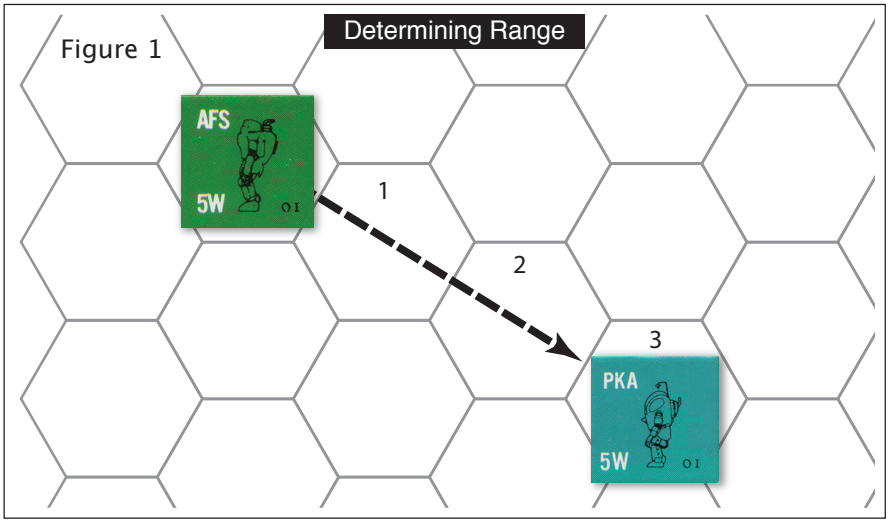
D (Destroyed): The target unit is destroyed and is removed from the board.

A (Armament Disabled): The target unit's weapon is destroyed. Place an "Arm. Disabled" marker on the unit. This unit cannot attack for the rest of the game, even if it has multiple weapon systems.† (For an example, consult [14.47]). The unit can still participate in close quarters combat.

M (Immobilized): Place the "Immobilized" marker on top of the target unit. The unit can no longer move. Flying units are destroyed, although the Hornisse has the ability to land within 5 hexes.

— (No Effect)

Figure 1



Subsequent damage results of the same type also have no effect.†

* If the attack roll result is a 2 (a one on each die), the result is a "D" without consulting the armor endurance chart.

–Example–
A P.K.A. is attacked by an A.F.S. and is hit. The player controlling the P.K.A. rolls two dice and the sum of the dice is 3. Using the P.K.A.'s armor endurance of "B", consulting the armor endurance chart shows that the unit is destroyed (D).

[5.1.3] Modifiers
The attack Target is calculated by subtracting the target unit's defense ability from the attacking unit's attack strength. Additional modifiers are added depending on the situation (range, terrain, etc.). These modifiers are indicated in the Terrain Effects and Attack Modifiers charts, and explained below.

1. Terrain
Attack modifiers are based on the terrain that the target unit is in, and the weapon that the attacking unit is using. The terrain of the attacking unit has no effect.

As long as some form of terrain is in the same hex as the target unit, it will gain some form of benefit. However, if the hex is a partial building hex (refer to [7.17]), a Type II unit will not gain adjustments for the building.

If the attack crosses a ridgeline, the attack modifier for the ridgeline is added to other terrain modifiers. Consequently, if an attacking unit fires at a target unit in a forest beyond a ridgeline, with a laser, the terrain modifier will be (–2) + (–2) = -4.

2. Range
If the range is short, the attack target is usually better. At long range the attack target is worse. Because the modifier changes depending on the weapon, consult the "Range adjusted Attack Ability" chart, a part of the "Attack Ability" chart.

3. Indirect Attack
If the attack is indirect, a uniform modifier of –3 is applied.

4. Target's Damage
If the target unit is immobilized (M), there is a modifier of +2.

For strafing runs by air units, there is no range modifier applied.

All modifiers are cumulative.

—Example—
An attacker is making an indirect attack with a rocket, with a range of 9 hexes, against a target in the forest. The base attack target is 9 (attack ability – defense ability), the modifier for terrain is (–1) and the adjustment for indirect attack is (–3). The total modifier is (–4), and the final attack target becomes 5. (9 – 4 = 5)

[5.1.4] Attacks cannot be made against a hex, from outside that hex, if it contains units on the attacker's side.

[5.2] Direct Attack
When making a direct attack, the attacking unit must be able to see the target. For direct attacks, there is offensive attack, close quarters combat (both initiated by the phase player), and the defensive attack that is made by the anti-phase player.

[5.3] Offensive Attack
Offensive attacks are made by the phase player's units. A unit that makes an offensive attack cannot move in the same phase. (Exceptions: see [13.2], Overrun; and [14.2.2], Infantry Charge).

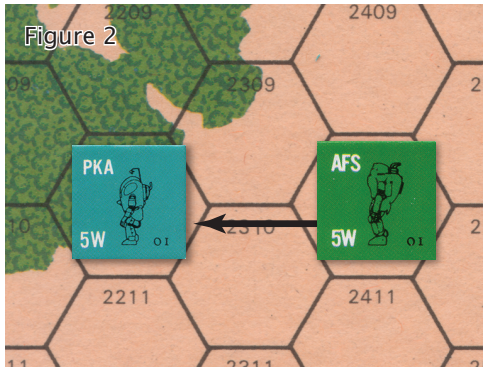
[5.3.1] Each unit can only make a single offensive attack in a phase. (Defensive attacks can be made as many times as necessary.)

[5.3.2] Multiple units may attack a single target. Attacks are settled individually between each attacking unit and the target unit. (Exception: see [14.2.1], Stacked Infantry)

[5.3.3] If the units are stacked, multiple units can attack the same target at the same time. When the attack is declared, it must be announced that it will be a "Simultaneous Attack". Stacked units do not have to make a Simultaneous

Ranged Attack Examples

Offensive Attack
Defensive Attack
Movement

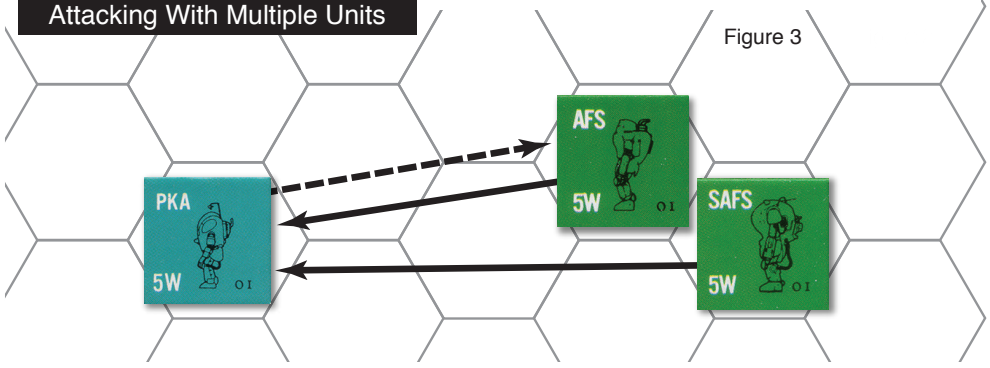


Basic Attack

An AFS uses its laser (attack ability of 8) to attack a PKA (defense rating of 2).
Calculate the Attack Target
① (Attack Ability) – (Defense)
8 – 2 = 6
② Range: 2 hexes
+1
③ Terrain: Laser fire through forrest
–2
Total of the above
6 + 1 – 2 = 5
Die Rolls (using addition)
result is 2 + 3 = 5, hit
result is 1 + 5 = 6, miss
Die Rolls (if using multiplication)
result is 2 × 3 = 6, miss
result is 1 × 5 = 5, hit

Attacking With Multiple Units

Figure 3



The PKA can make a Defensive Attack against the AFS, but not the SAFS because it is 4 hexes away. The AFS and SAFS may not make a Simultaneous Attack because they are not in the same hex.

Attack, they can attack separately, but it changes the way the attacking units receive defensive attacks (see [5.4.1] and [5.4.2]). Simultaneous Attacks are still resolved individually between each attacking unit and the target unit.

Units that are not stacked cannot conduct a Simultaneous Attack.

[5.3.4] Attacks that have been announced must be executed. Even if the final attack target is below zero, or the target unit is destroyed with the very first attack of a simultaneous attack, even if the attack had no effect, once it is executed, the attacking player must check for ammunition expenditure, energy usage, and accidents.

[5.4] Defensive Attack

When certain conditions are met during the phase player's turn, the anti-phase player can make attacks with the appropriate units. These conditions are:

1. If the target unit remains alive after receiving an attack from within 3 hexes.
2. If a unit is stacked with a target unit that received an attack from within 3 hexes.
3. The phase player's unit entered a hex adjacent to the anti-phase player's unit, and challenged the anti-phase player's unit to close-quarters combat.

A unit that has fulfilled any of the above conditions can proceed with a defensive attack.

[5.4.1] With conditions 1 and 2, for each attacking unit firing alone, not part of a Simultaneous Attack, each unit capable of making a defensive attack may do so against the attacking unit.

[5.4.2] With conditions 1 and 2, if the attacks are part of a simultaneous attack, each unit capable of making a defensive attack may do so against one unit of the attacking stack, after all the attacks of the attacking units have been resolved.

[5.4.3] With condition 3, when the phase player moves a unit into an adjacent hex, the anti-phase player may attack. This may lead to close-quarters combat, described later.

[5.4.4] A defensive attack can proceed any time any of the three conditions are met. It is possible for a single unit to make many defensive attacks in a single phase, and a unit may make offensive and defensive attacks in the same turn. (Only one offensive attack is allowed.)

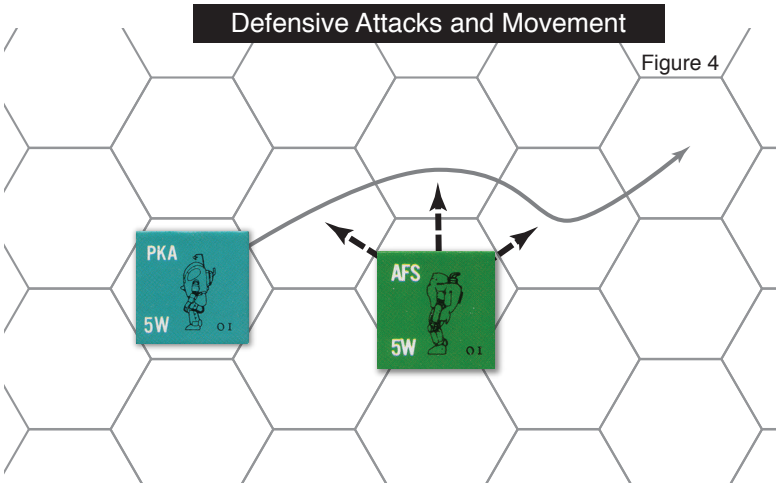
[5.4.5] A defensive attack is a direct attack only. A defensive attack may not be part of a simultaneous attack.

[5.5] Indirect Attack

Some weapons may be fired at units that are not directly visible to the attacking unit. These weapons are the Doll House heavy rocket shells, the Sphinx's rocket shell, and the Goblin's TOS anti-tank rocket shell.† In order to make an Indirect Attack, a third unit must have

Defensive Attacks and Movement

Figure 4



With the movement of the PKA as shown, the AFS can make 3 seperate Defensive Attacks.

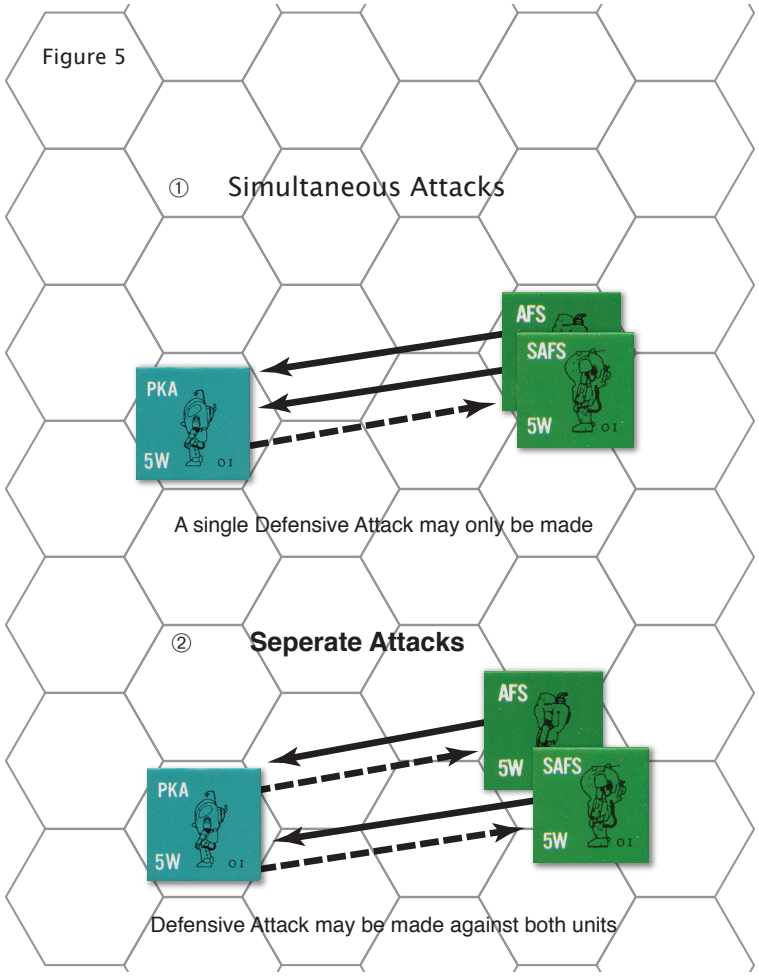
Simultaneous Attacks

① The AFS and SAFS can make a Simultaneous Attack against the PKA. If the AFS attacks first and the PKA is eliminated, the SAFS is still considered to have attacked, and an attack roll should be made to check for the weapon's usage limit.

If the PKA survives both attacks, it can make a Defensive Attack against either the AFS or the SAFS.

② If the AFS and SAFS attack seperately, the PKA can immediately make a Defensive Attack against each attacker, if it survives the attack.

Figure 5



a view of the target, this unit is called a "spotter".

[5.5.1] A spotting unit is anything, including all ground units and strafing flying units, as long as the intended spotting unit has not been used more than half of its movement points and has not made any offensive attacks. Spotting units also may not initiate close quarters or overrun combat.† Once it has been designated as a spotter, it may not move more than half of its movement points or make any offensive attacks in the current turn. Flying units used to survey cannot attack ground units.

[5.5.2] Weapons capable of indirect attacks affect the target hex and the six adjacent hexes, even when used to make a direct attack.† Unlike most other direct attacks, the target is not a single unit. All units within the effect of the attack are hit. Some large missiles and artillery cannons will cause effects in hexes up to two hexes away from the target hex. Effect range is noted on the Artillery Capability Chart.

[5.5.3] To determine if an indirect attack hits, make a single die roll against the attack target, regardless of the number of units that will be affected. Determine the attack results for each unit using its individual endurance. Units outside the target hex get a +1 to the endurance roll.

[5.5.4] An indirect attack cannot be targeted at a hex that contains a friendly unit. If the attack effects adjacent hexes, and one of those units contains a friendly unit, the attack cannot be made.

(6.0)

Line of Sight

When making a direct attack, or using a spotting unit for indirect attack, the target must be visible.

[6.1] Line of Sight

[6.1.1] In order to view the target, the attacker's unit must have a direct line of sight to the target unit. The line of sight is a straight line from any part of the hex the viewing unit is in to any part of the target's hex. If this line can be drawn across the terrain without being obstructed, the viewing unit has line of sight to the target unit, allowing it to attack or spot.

[6.1.2] The line of sight will not pass through the following terrain, however the terrain of the hex of the viewing unit and the target unit do not obstruct the line of sight.

Obstacle terrain: building, forest, hill, hexes with smoke markers, and hexes with fire markers.

These terrains block line of sight without regard to elevation level, as described in [6.2].

[6.1.3] Ridgelines and walls obstruct the sight line, with the following exceptions.

1. When the target is a Type I unit. If the line of sight crosses a ridge or wall, and a Type I target unit is in a hex immediately adjacent to the ridge or wall, there is a line of sight. There is no line of sight to Type I targets beyond this hex. (Figure 6)

2. When the target is a Type II unit. When the target is a Type II unit, line of sight continues to two hexes past the ridge or wall. There is no line of sight to the third hex or beyond. (Figure 7)

Any line of sight established between two units is mutual.†

[6.1.4] There is no limit to the length of the line of sight, but attacks are still limited by the weapon's range.

[6.1.5] Adjacent units always have line of sight.

[6.1.6] Units, whether friend or foe, do not obstruct line of sight or attacks.

[6.2] Elevation

[6.2.1] All terrain symbols have a height. Consult the terrain effects chart for the height of each type of terrain.

[6.2.2] If the line of sight passes through a hex with a height level of 1, that line of sight is obstructed. If the hex of the viewing unit and the target unit are both height level 1, the line of sight is not obstructed in the above mentioned case.

Ridge Lines, Unit Types, and Line of Sight

Figure 6

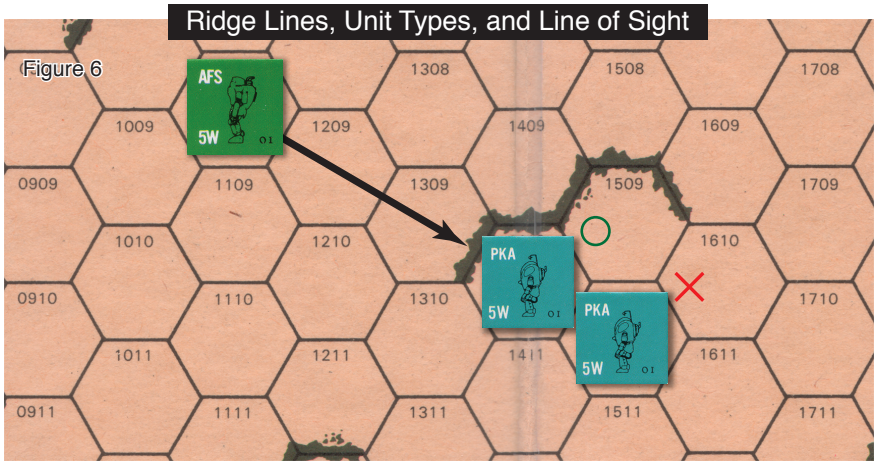
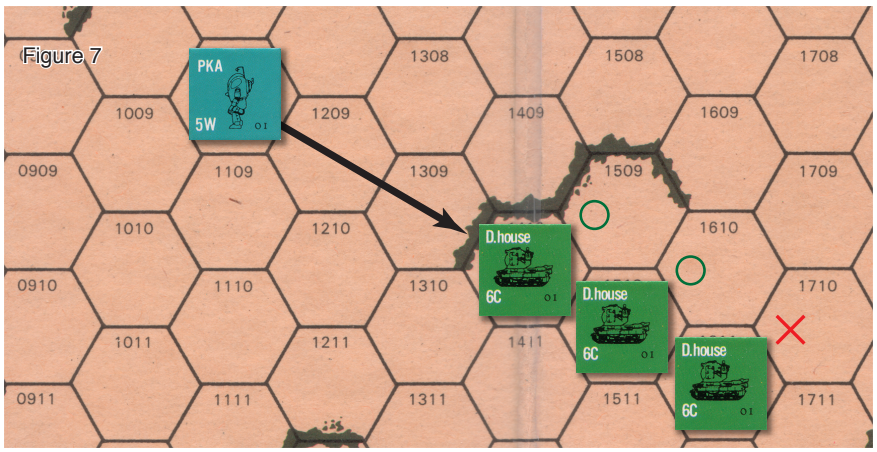


Figure 7



[6.2.3] Special: When the hex of the viewing unit, target unit or both units has a height of 1, the line of sight is not blocked by ridge lines or walls.

There is an exception if the ridge or wall is on a hex side of the viewing or target unit's hex. In this case use the rules from [6.1.3].

(7.0)

Movement

The phase player may move units using the following rules. These units may also be subject to defensive attacks from the anti-phase player.

[7.1] Procedure

[7.1.1] Units move from their current hex to an adjacent hex, one at a time. A unit cannot skip hexes.

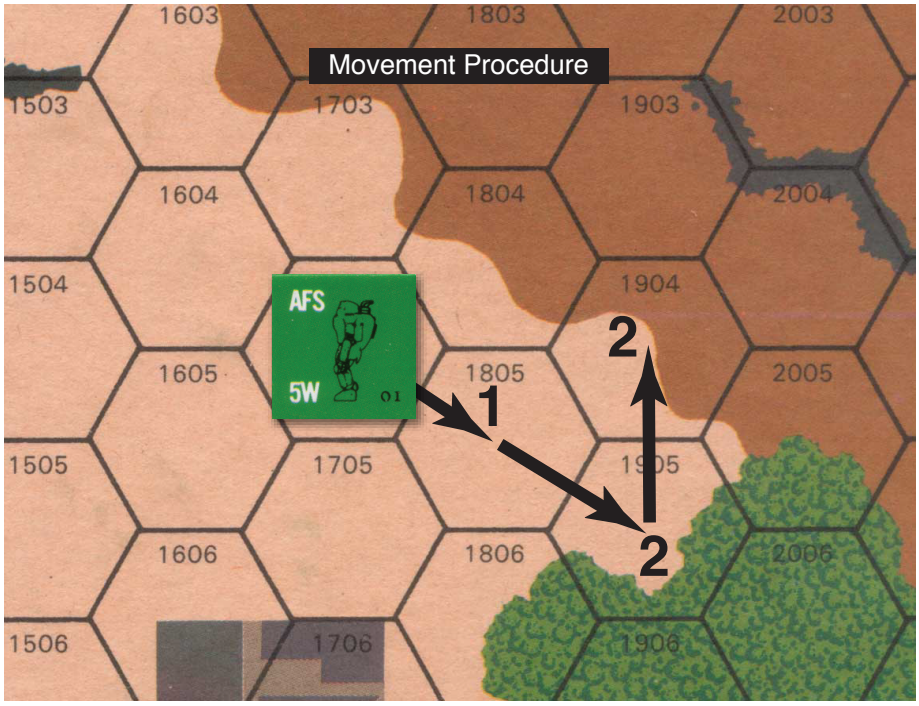
[7.1.2] The movement capability of a unit is printed on the front, lower left corner of its token. The number is the number of movement allowance the unit has, and the letter denotes its form of movement. The movement allowance is the maximum number of "movement points" a unit may spend in a single phase. The unit may spend any amount up to this value (Figure 9).

[7.1.3] The movement cost to move into a hex is determined by the terrain and movement form. This is shown in the Terrain Effects chart. If a unit does not have the number of points left to meet the cost of the terrain, the unit cannot enter the hex.

[7.1.4] If a hex contains several terrains, factor in all terrains that influence the unit entering the hex. If the hex partly contains water, and the unit cannot traverse it, then the water can be ignored, although the unit may not pass through any hex side that is blocked by that terrain. Because ridges and walls occur along hex sides, and not in the hexes, they are not included in this regulation (see [7.1.5]).

[7.1.5] On the Terrain Effects Chart, a (+) is attached to the mobility of ridges and walls. If a unit enters a hex by passing through a ridge or wall, the appropriate movement cost must be added to the cost of hex being entered. If a hover (H) type unit enters a desert by passing a ridge, the cost will be 5 movement points (3 to enter the desert, and 2 to pass the ridge).

[7.1.6] The movement cost for roads and trails on the Terrain Effects Chart is used when the unit is continuing movement along a road or trail from one hex to the next. Only the cost of the road or trail applies and the surrounding terrain is ignored. If a hex with a road or trail is entered from a hex that does not contain a road or trail, the movement cost of the hex is based on the surrounding terrain, and the road or trail is ignored.



[7.1.7] There are two kinds of hexes with buildings. One is the complete building hex, which is entirely covered with buildings, and the partial building hex, which are only partially covered with buildings. When moving through hexes with partial buildings, Type I units are considered to be among the buildings, as though the unit were in a complete building hex. If the unit is a Type II, it is outside the building, in the surrounding terrain.

When a Type I unit is in a partial building hex, it benefits from the building attack modifiers from the Terrain Effects Chart, and a Type II unit does not (see [5.1.3], Modifiers).

[7.1.8] W and C type units cannot enter a river or water hex.

[7.1.9] As long as a unit has not exceeded its movement points, it may continue to move. Unused movement points are lost at the end of the turn, they are not held over to the next turn, nor can they be shared with other units.

[7.2] Movement Restrictions

[7.2.1] A unit which made an offensive attack cannot move in the same phase, and a unit that has moved cannot make an offensive attack, except for close quarters combat (Exceptions: see [14.0] and [19.0]).

[7.2.2] The unit may not spend more movement points than its printed value in a single phase.

[7.2.3] A unit is free to move through friendly hexes without penalty regardless of the stacking regulations (explained later).

To enter a hex occupied by an enemy unit, close-quarters combat must take place. When entering a hex containing an enemy, the moving unit must stop regardless of what movement allowance remains, and may not be moved again in that phase.

[7.2.4] When entering a hex adjacent to an enemy during movement, the anti-phase player has an opportunity to make

a defensive attack. The phase player does not have to ask if the anti-phase player intends to make defensive attacks every time the moving unit enters an adjacent hex, but the phase player must clearly show the route the unit is moving, and interrupt the movement if the anti-phase player announces a defensive attack. Once the attack is resolved, movement may resume, if possible.

[7.2.5] The phase player may move units individually or in stacks (see [8.0, Stacking). Once a unit or stack has completed its movement, it cannot be moved further, and the next unit or stack may be moved.

[7.2.6] When units are moving together as a stack, the movement of all units is limited to the lowest movement point value of the units in the stack.

[7.3] Carrying

A Type I unit that is not immobilized can carry another Type I unit that is immobilized. Though Type I, the N.Spotter and Krachen Vovel cannot carry units.†

[7.3.1] Units must be stacked in order to carry (see [8.0], Stacking). Declare that carrying is taking place and the units will then move together, with the carried unit at the bottom of the stack. To drop a carried unit, simply declare that it is no longer carried. Both picking up and dropping another unit costs 1 movement point.

[7.3.2] Units are under the usual restrictions for stacking when a unit is being carried, and both units involved are still targeted separately.

[7.3.3] If the carrying unit is destroyed or damaged, the unit being carried is immediately dropped in the current hex.

(8.0)

Stacking

When two or more units are in a single hex it is called "stacking". There is a limit on the number of units each army can stack in one hex. This is called the "stack limit".

[8.1] Stack Points

The stack limit is based on stack points. Each unit has a stack point value based on its type, as shown below.

Type I, along with Jerry, Oskar, Goblin, Gladiator, Kafer
..... 1 Stack Point

Type II and Infantry
..... 2 Stack Points

Type III, when strafing
..... 1 Stack Point

[8.2] Stacking Limit

When a phase ends, or during close quarters combat, the number of stacking points in a hex must not exceed 4 stack points (Figure 9).

[8.2.1] While the stacking limit must be applied at the end of the phase or in close-quarters combat. At any other time, such as during movement, it does not matter how many units are stacked.

[8.2.2] In close-quarters combat, the stacking limit is separate for each side.

[8.2.3] Even though the NeuSpotter is 1 stack point, two NeuSpotters may not be in the same hex, unless accompanied by a Type II unit.

[8.2.4] Stacking limits are a concern for flying units making strafing attacks. The stack limit for flying units is considered separately from the stack limit of the ground units. Therefore, it is acceptable to have flying units stacked to 4 points and ground units stacked to 4 points.

[8.2.5] Non-unit markers and pilot markers are not counted in the stack limit. These types of counters may even be placed in hexes that are already stacked to the limit.

(9.0)

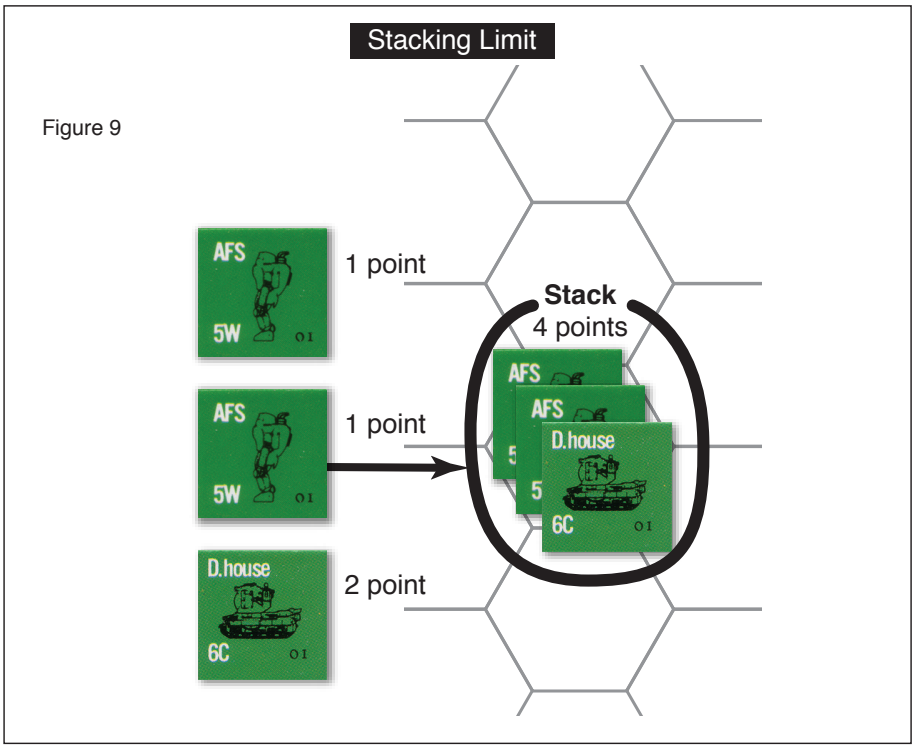
Close Quarters Combat

All attacks between ground units in the same hex are "close quarters combat". The attacks involved consist of lasers or small arms on tanks such as the NutRocker, or even unarmed attacks used by armored fighting suits.

[9.1] Procedures

A unit that has moved can engage in close quarters combat in the same phase (see [7.2.1]). The phasing player's unit must stack in the same hex as the anti-phase player's unit, at which point close quarters combat begins. The procedure is as follows.

Figure 9



1. The phase player advances a unit into a hex adjacent to an enemy, and states intent to enter the enemy hex and engage in close quarters combat. (A unit may only enter an enemy hex if it is going to engage in close quarters combat).

2. The anti-phase player proceeds with defensive attacks using any units in the target hex. The defensive attacks may target any unit that will be involved in close quarters combat. The anti-phase player may choose to move into the phase player's current hex to engage in close quarters combat. Once this is decided, the phase player moves into the target hex if the units involved are not already in the same hex as the enemy unit. The defensive attacks then proceed in the same hex.

3. After the defensive attack, the phase player's units that remained alive will proceed to attack. The phase player decides which units are attacking which targets, and may have multiple units targeting a single enemy unit.

[9.1.1] When a unit enters an adjacent hex, it is possible for defensive attacks to be made even if there is no intent to engage in close quarters combat.

[9.1.2] The phase player can move other units into the hex where close quarters combat is occurring. This situation is the same as participating in an ongoing close quarters combat, described in [9.3.3].

[9.2] Defensive Attacks in Close Quarters Combat

Defensive attacks against close quarters combat proceeds in any of the following situations.

1. When an enemy is in an adjacent hex.
2. When an enemy enters the same hex.

A unit that engages in case 1 cannot attack in case 2.

[9.2.1] Defensive attacks for close quarters combat is completely discretionary. If, for example, a stack was targeted for close quarters combat, it is possible for one portion of the stack to attack the adjacent hex, for another portion to attack in the same hex, and for the remaining portion to not attack.

[9.2.2] After the offensive units have made their attack, units not attacked in close quarters combat may not make defensive attacks.

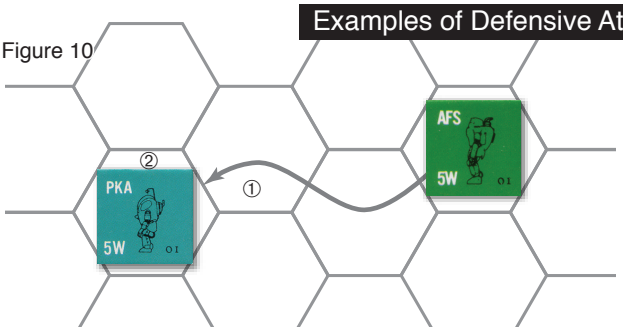
[9.2.3] Defensive attacks may not be made into a hex containing friendly units.

[9.2.4] Selection of targets and resolution of defensive attacks are conducted on a unit-by-unit basis. In other words, a defensive attack may be declared after seeing the results of another unit's attack. However, the natural flow of time may not be breached; in particular, if a defensive fire is resolved against a unit that has moved into the same hex, a defensive attack may not be declared against units in the adjacent hex.

[9.2.5] Results of defensive attacks are applied immediately. If a unit is immobilized in an adjacent hex, it does not move into the target hex. If a unit is destroyed in the same hex by defensive fire, it does not get to attack.

Examples of Defensive Attacks in Close Quarters Combat

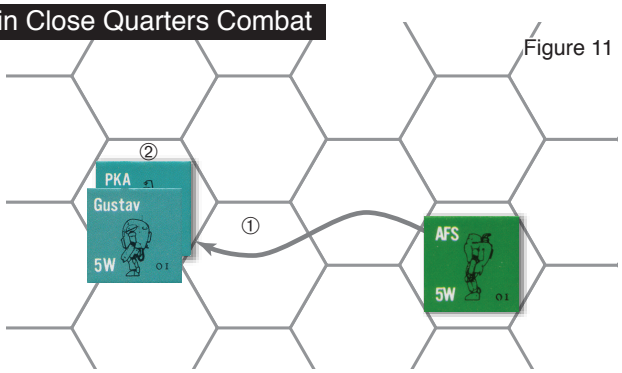
Figure 10



The AFS enters hex ① and the player announces the intent to engage in close quarters combat before moving into hex ②. If there is no intent to engage in close quarters combat, a defensive attack can be made by the PKA as normal (see Figure 4). If there is intent to engage in close quarters combat, the PKA may make a defensive attack against the AFS when it is in either hex ① or hex ②.

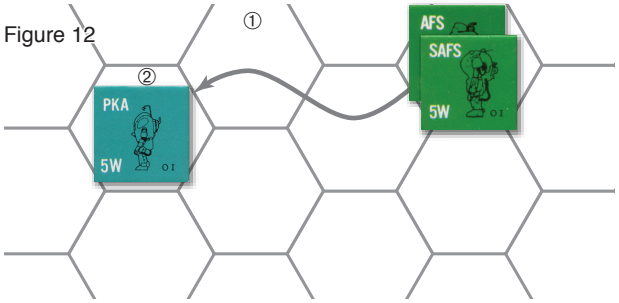
If the AFS becomes immobilized in hex ①, its movement ends, and the 'Immobilized' marker is placed. If it is immobilized in hex ② it can still attack the PKA.

Figure 11



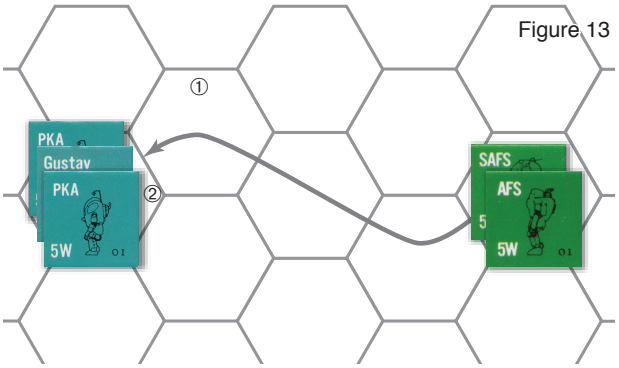
The PKA and Gustav can make defensive attacks against the AFS. It is possible to have one attack when the AFS is in hex ①, and the other attack when the AFS is in hex ②. But all attacks to be made while the AFS is in hex ① must be resolved before any attacks against the AFS in hex ②.

Figure 12



The PKA may make a defensive attack against either the AFS or SAFS when they are in either hex ① or hex ②.

Figure 13



Each PKA and Gustav can make a defensive attack, one at a time, against the AFS or SAFS.

[9.3] Continuing Close Quarters Combat

After both sides have conducted attacks in close quarters combat, if undestroyed units from both sides remain in the same hex at the end of the phase, this is called a "continuing close quarters combat".

[9.3.1] If a continuing close quarters combat exists at the start of a player's phase, the phasing player chooses from among the following:

1. Conduct close combat as is.
2. Conduct close combat by moving in additional units as reinforcements.
3. Retreat (move out of the hex).
4. Leave it as is (do nothing).

[9.3.2] If close quarters combat is continued, the phasing player chooses a target for each of his units, and then resolves all attacks in order. After that, the non-phasing player declares and resolves his fire in the same way. This combat is resolved simultaneously; the phasing player's combat results do not affect the resolution of attacks by the non-phasing player. Phasing units that conduct close combat may not perform any other action this turn. Non-phasing units may be pinned as indicated in [9.4].

[9.3.3] Additional units may enter the close quarters combat by following the normal procedure of moving to an adjacent hex, where defensive attacks may be declared. Such defensive attacks are limited to unpinned units that can fire into the adjacent hex. Units that survive these defensive attacks move into the close quarters combat hex. Same-hex defensive attacks are prohibited, and the close quarters combat is resolved as in [9.3.2]. Units that made defensive attacks at the approaching units may participate in the close quarters combat this phase as normal.

[9.3.4] In the case of retreat, defensive attacks may be conducted against units once they have moved into an adjacent hex. If one or more of the phasing player's units remain in the close quarters combat hex, only unpinned units may conduct defensive attacks. Units may move directly from an enemy-occupied hex to another enemy-occupied hex.

[9.3.5] If the phasing player chooses to do nothing, there is no penalty, and defensive fire may not be conducted.

[9.4] Pinned Units in Close Quarters Combat

Each unit in close quarters combat exerts some influence over opposing units in the same hex.

[9.4.1] One anti-phasing unit is pinned for each phasing unit in the same hex. For example, if the phasing player has 2 units in a hex, and the anti-phasing player has 4 units in the same hex, 2 of the anti-phasing player's units are pinned, and the other 2 are unpinned.

[9.4.2] Phasing units that are immobilized or unable to fire do not count towards determining the anti-phasing player's pinned units.

[9.4.3] Units are not pinned specifically, only the number of units pinned is important. The phasing player decides which units are unpinned.

[9.4.4] Pinned units may not conduct attacks into other hexes, including defensive attacks against an adjacent hex.

[9.5] Unarmed Combat

All Type 1 units may perform "unarmed" combat in close quarters combat. All unarmed combat is performed after resolution of attacks from opposing units, except for opposing unarmed combat. All unarmed combat is resolved simultaneously.

The to-hit range of unarmed attacks is always an unmodified 4, regardless of defensive strength.

(10.0)

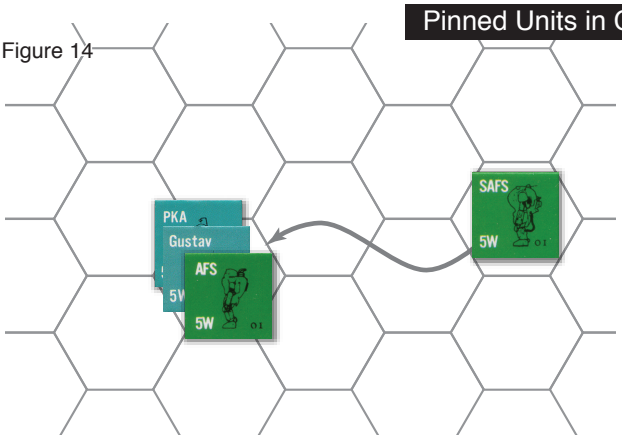
Aeronautical unit

The Falke, PK40, Salamander, and several other units in the game are aeronautical units. In addition, when joined with a PK41, the PKA, Gustav, or Konrad also become aeronautical units.

Aeronautical units can engage in air-to-air (dog-fighting) or air-to-ground (air support) combat. Units assigned to air combat are fighting for air superiority and to support units assigned to ground combat. Units assigned to ground combat can attack an enemy ground

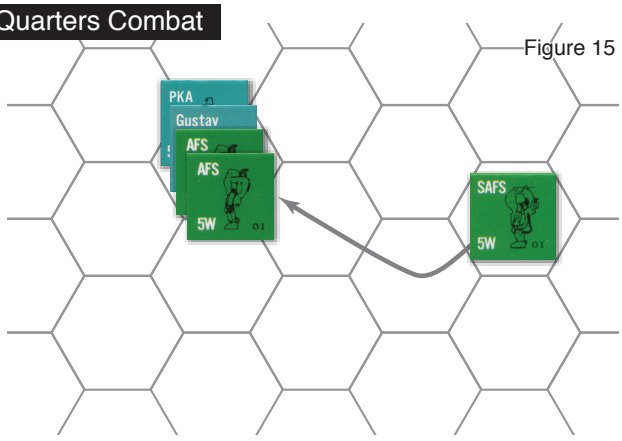
Pinned Units in Close Quarters Combat

Figure 14



Either the PKA or Gustav is pinned by the AFS (the phasing player decides), so only the unpinned unit may make a defensive attack against the SAFS. When the AFS initially engaged in close quarters combat, would have been able to make defensive attacks, if neither were pinned at the time.

Figure 15



The SAFS may enter close quarters combat without taking any defensive attacks from the PKA or Gustav. In the case of Figure 14, with 3 units in the hex, the SAFS could be the target for defensive attacks, even when moving through adjacent hexes (see Figure 4), but in Figure 15, no defensive attacks are possible.

unit, or provide support for indirect attacks.

[10.1] Procedure

[10.1.1] During the air war phase, both players assign their aeronautical units to "Air Combat Mission" or "Ground Combat Mission". The assigned unit should be placed in the appropriate space on the air commitment card. Units that cannot attack may not engage in Air Combat Missions.† Once both players are finished assigning their units, the assignments are compared. air combat missions are resolved with the appropriately assigned units, and then breakthrough is conducted, depending on the results.

Note: The air commitment cards are provided in both Japanese games, and at the end of this rulebook.

[10.1.2] A player's units assigned to ground combat missions resolve their mission during that player's phase. There are three types of ground combat missions.

1. Air-to-ground attack
2. Spot for indirect attacks
3. Land (Hornisse only)

An aeronautical unit assigned to ground combat can only do one of the above actions.

[10.1.3] An aeronautical unit that has completed its duty is moved to the "Used" space on the duty chart.

If an aeronautical unit has survived, it can be used again on the next turn.

[10.1.4] A player may withdraw an aeronautical unit that is deemed as unnecessary during the air war phase. However, the unit may not be withdrawn before the first turn or a turn in which the unit is deployed.

[10.2] Air Combat Mission

In the air war phase, the aeronautical units assigned to air combat engage in battle. Depending on the outcome, breakthrough is conducted.

[10.2.1] To begin air combat, total the dog-fight rating of the aeronautical units for each side. Compare the dog-fight rating of each side to get the ratio. The side with the higher rating is the aggressor (if the powers are equal, the attacking player, as assigned by the scenario, is the aggressor). Roll one die and compare the result to the appropriate ratio column in the Dog-Fight Resolution Chart. The values given are the rating points that each side loses. Each side loses a number of points as close to the value as possible, without going over.

-Example-
If the Mercenary Troops only have the Falke remaining (dog-fight rating of 4), and receive a loss of 3 points, no units are affected.

If the Strahl Troops have three PK40's (dog-fight rating of 2) and two Hornisse (dog-fight rating of 3), and receive a loss of 3 points, a single Hornisse is lost. If the loss is 4 points, two PK40's are lost instead.

[10.2.2] Units which are lost in air-to-air combat do not make a durability check. The units damaged are automatically destroyed (D).

[10.3] Breakthrough

If there are no opposing units assigned to air combat missions, or if one side has a number of units equal to double that of the enemy after the dog-fight, it is possible to conduct breakthrough. A number of units equal to the difference in the number of units on each side may attack units assigned to ground combat missions.

-Example-
If the Strahl Troops assign six units to air combat, and the Mercenary Troops assign three units, then the Strahl have reached the required number for breakthrough, and three units (6 – 3 = 3) may breakthrough.

[10.3.1] Breakthrough is resolved in the same way as a dog-fight, but the dog-fight rating of the defensive side is 0.

[10.3.2] Damage from breakthrough is applied immediately.

[10.4] Air-to-Ground Combat

[10.4.1] Procedure

1. The phase player places ground combat aeronautical units on the board. The maximum number of units that can be placed in a hex is four (this does not include ground units). The attacking units may be placed all at once or individually. Individual units may be placed and resolved before the next unit is placed, and does not count against the stack limit for that hex. In other words, if all units attack individually, they may all attack a single hex.
2. All units of the anti-phase player in the target hex can make an anti-aircraft attack against the aeronautical units (the controlling player decides which units fire on which aeronautical units, each unit can only fire once, and only on a single aeronautical unit). After deciding which units will make an anti-aircraft attack, the attacks are resolved. Anti-aircraft attacks are resolved in the same manner as direct fire.
3. If any aeronautical units survive the anti-aircraft attacks, they resolve their attacks on units in the target hex (similar to anti-aircraft attack). After declaring which units are attacking which targets, all attacks are resolved.
4. Once its attack is complete, the aeronautical unit is placed in the "Used" space on the duty chart.

The above procedure is followed for each unit involved with air-to-ground combat.

[10.4.2] Attacks against ground units are modified by terrain. There is no modifier for range.

[10.4.3] Anti-aircraft attacks are not modified by terrain or range.

[10.4.4] Ground attacks are resolved during a player's phase. (All attacks or actions involving aircraft are done 'in turn', as usual).

[10.4.5] With each air-to-ground attack it is possible for units to make an anti-aircraft attack. As indicated by [10.4.1], each unit in the target hex gets an anti-aircraft attack with each air-to-ground attack.

[10.4.6] In both the air-to-ground and anti-aircraft attacks, the rules for ammunition limits apply.

[10.5] Spot for Indirect Attacks

A single aeronautical unit assigned to ground combat may provide support for a single indirect attack, as a spotter. Simply declare that the unit is providing support, and after the indirect attack is resolved, move the aeronautical unit to the "Used" space.

[10.6] Landing

The PKA (as well as the Gustav and Konrad) can join with a PK41 to become a "Hornisse". When entering a scenario as reinforcement, the Hornisee is in flight. It may land when assigned to a ground combat mission. When stacked in flight, they can land in adjacent hexes.

While the SAFS joins with the Falke II in a similar manner, separating the two is not a simple task on the battlefield, so the Falke II is treated as a single unit.†

[10.6.1] The Hornisse (PK41) can land in any hex it can enter. When it lands, it immediately separates. After landing, there are two units stacked in the hex.

The detached PKA cannot move or attack in the current phase.

[10.6.2] In the phasing player's turn, if the PK41 and PKA are stacked at the beginning of the turn, they may unit and launch, although this is optional. The launching Hornisse is placed in the "Used" space of the duty chart.

A PKA that boards a PK41 may not move or attack in that turn.

[10.6.3] If the landing hex contains an enemy unit, an anti-aircraft attack can be made. The landing unit is considered to have class 'C' durability, and a result of M (immobilized) or A (armament disabled), destroys the landing unit. The result is applied to both the PK41 and the PKA.

A surviving Hornisse lands and separates. The PKA cannot attack during the current phase, but the following phase starts with the units in a state of continuing close quarters combat.

[10.6.4] A PKA and PK41 in the same hex as an enemy may unite and takeoff. The enemy units may conduct anti-aircraft attacks, as in [10.6.3].

[10.6.5] When the Hornisse lands the two units separate immediately. This effects the stack restrictions of the landing hex.

(11.0)

Weapons

[11.1] Types of Weapons

[11.1.1] Each unit's weapon type is printed on the back of its token – along with attack power and range (see [3.2] for reference). The types are as follows:

L..... Laser
G. ..... Large bore gun (tank guns and similar weapons)
MG .. Machine gun
R ..... Rocket
PF..... PanzerFaust

[11.1.2] The listed weapon of the Gustav and Konrad is L (the laser), but in addition it carries the PanzerFaust. When the Gustav and Konrad use the PanzerFaust, the attack values are the same as the PKA. Namely, attack power 10 and range 4.

[11.1.3] The Goblin is listed with L (the laser), but it also carries rockets. Use the Goblin rocket token for reference (see [3.2]). The token is stacked with the Goblin token, and only shows the attack power and range of the rocket, but not the quantity. The quantity is indicated by a separate token.

The rocket quantity tokens are numbered from "1" to "4".

[11.2] Usage Limits for Weapons

[11.2.1] If a laser weapon is fired and the attack roll results in a natural (5 and 6, or 6 and 6), the power to the laser is depleted. The current shot is still resolved, but the laser cannot be used to make any further attacks. There is no way to recharge the laser during the game.

[11.2.2] If a machine gun is fired and the attack roll results in a natural (6 and 6), the machine gun breaks down. The current shot is still resolved as normal, but no further attacks can be made with this weapon. The machine gun cannot be repaired.†

[11.2.3] If the laser or machine gun breaks down, place an "Arm. Disabled" token to indicate that it cannot use its weapon.

[11.2.4] For rockets and PanzerFaust (PF), the number of shots each unit carries is given below.

Rocket
- Doll House..... 4 rounds
- Sphinx ..... 5 rounds
- Oscar ..... 2 rounds
- Goblin ..... 3 rounds†
- Gladiator..... 3 rounds

PanzerFaust
- PKA ..... 2 rounds
- Gustav ..... 2 rounds
- Konrad..... 2 rounds
- Krachen Vogel .. 6 rounds

A unit with rockets can only fire one time during a phase. Two PDF rounds can be fired in a single phase (only in the case of defensive fire and anti-aircraft fire).

[11.2.5] Place a rocket count token to indicate the number of rounds fired. For example if a unit has fired 3 rounds, place the "3" token with the unit. Once the maximum number of rounds has been reached for rockets and PF, the numeric counter is removed, and the "Arm. Disabled" is placed on the unit. Until rounds are added, the rocket or PF cannot be used (see [11.3]). Rockets may only be reloaded if a scenario gives specific rules for doing so.†

[11.3] Supplement of PF

[11.3.1] For units that use the PF (except for the Krachen Vogel), it is possible to reload up to the starting number of rounds when in the same hex as the Depot (the ammo dump).

The unit may be supplied the moment it enters the Depot hex, as long as an enemy unit is not in the same hex. As long as an enemy unit is in the hex, supply is not possible.

[11.3.2] There is no limit to the number of times a unit may be supplied at any one Depot.

[11.3.3] If a player's unit is unopposed in the hex of a Depot of the enemy, the unit may destroy the Depot as its action. Once the player resolves the action, the Depot token is removed. In order to destroy the depot, (1) one movement point is spent, and (2) the unit attacks within the hex, and must be able to do so.

[11.4] Equipment

For aeronautical units, it is possible to carry equipment other than the standard armament. The scenario determines the equipment carried.†

[11.4.1] The additional equipment includes three types of bomb, missile, and laser. The appropriate marker (see [3.2]) is placed under the unit to show that it is equipped.

[11.4.2] The bomb and missile can only be used when the aeronautical unit is assigned to a ground support mission. When attacking the unit can use either its equipment or its regular attack. Once the piece of equipment is used, the marker is removed.

The laser can be used for air support or ground support missions. The laser can be used any number of times, but the normal rules apply for the energy limit (see [11.2.3]).

[11.4.3] When using the laser for air-to-ground attacks, the attack power on the laser token is used. When using the laser in air-to-air combat, use the dogfight power of the unit, and add (+1) for the marker.

(12.0)

Miscellaneous Rules

[12.1] Initial Deployment and Reinforcement

Several scenarios include reinforcements for either side. Also, some units begin the first turn on the map without entering from any particular direction. This is initial deployment. Units arrive at the beginning of the turn (ground units will move onto the board during the controlling player's phase). Aeronautical units may be assigned to a mission on the turn they arrive.

Ground units enter the map board according to the instructions in the scenario, and have their usual movement. Units may not arrive through a hex occupied by an enemy unit.

The entering unit must be able to enter the terrain of the hex it is arriving in, and spends movement points to enter that hex. If the unit arrives in a hex with a road that extends off of the map, it spends movement points as if it had moved along the road.

[12.2] Airdrop

In some scenarios the Nutrocker and other units are deployed using an airdrop. During that player's phase the air dropped unit may be placed in any hex it can occupy using normal movement. If placed in a hex occupied by enemy forces, the dropping unit receives anti-aircraft fire. This anti-aircraft fire is resolved as a normal ground attack (although the dropped unit cannot return fire). The dropped unit has a durability rating of 'C' for the attack, and a result of 'M' (Immobilized) results in destruction of the dropped unit. After the anti-aircraft fire is resolved, a dropped unit which is not destroyed is placed in the hex with the enemy units, and cannot attack or move during the current phase. The opposing units in the hex are considered to be in continuing close quarters combat on the next phase.

[12.3] Defensive Position

Some scenarios indicate the use of defensive positions. Each marker represents a suitable shield, trench, or similar defensive emplacement. The rating on the marker combines with the attack modifier of the terrain in the hex. In order to take advantage of the position marker, a unit's marker must be placed under the marker. Entrance and exit to a defensive position is carried out during movement. No movement points must be spent, but a defensive position already occupied by opposing units cannot be entered. If the position marker is empty, either side can enter. Defensive positions cannot be moved or removed during the game.

(13.0)

Vehicle units

Units classified as vehicles have additional abilities, such as transport and overrun attack. This is in addition to the regular rules for a ground unit.

[13.1] Transporting With a Vehicle Unit

[13.1.1] All vehicles and tanks of both forces have the ability to transport Type I units, infantry units, and pilot units.† This lets infantry units be moved around more quickly, and relocation of Type I units that have been immobilized, to a safe place.

[13.1.2] The transport rules are as follows. The units being transported are stacked under the vehicle unit, to indicate that they are loaded. The vehicle unit may not move on the turn that it loads, before or after loading.† On the next turn, the vehicle may move its regular allowance. When a unit unloads from the vehicle unit, it must spend half of its movement points (engaging in close quarters combat is possible). Infantry may move its one hex.†

[13.1.3] When fired upon, the vehicle and the units it is transporting are treated as a single target. The attack is resolved using the vehicle's statistics, and if the vehicle is destroyed, the units it transports are destroyed as well. If the result is immobilized or armament disabled, only the vehicle is affected.

[13.1.4] Units being transported may fire. However, they cannot fire and unload in the same phase.

[13.1.5] Each vehicle unit has a transport capacity of two stack points. Exception: The Sph69-p Troop Transport can carry 6 points of Type I units only (no infantry), and the Green Buffalo can carry 10 stack points.

[13.2] Overrun attack

A vehicle unit cannot engage in close quarters combat. If it is involved with close quarters combat, it can only receive attacks. If the vehicle is still armed it can make an overrun attack, even if it

is transporting units at the time (this is a variation of close quarters combat).

[13.2.1] If an overrun attack is made, defensive fire is resolved with the same procedure as close quarters combat, as the vehicle unit approaches the hex of the enemy unit (See [9.1]). After the vehicle unit finishes its attack, it passes through the hex side opposite the side it entered. If units in the target hex have survived, they do not make any additional defensive attacks because of this movement.

[13.2.2] The vehicle unit does not have to spend any extra movement points to make an overrun attack, however it must be able to move into the hex opposite of its approach. If the unit still has movement points remaining, it may continue to move and even make additional overrun attacks.

[13.2.3] Units being transported may make attacks during the overrun attack, however any units that participate in the overrun attack may not unload in that phase, or make any other attacks.

(14.0)

Infantry Squads

Tokens marked with the silhouette of soldiers, or 'Inf.', are Infantry units. This unit represents approximately four to ten soldiers and any firearms carried by them. The unit behaves as a typical ground unit except for the following special rules.

[14.1] Infantry Movement

An Infantry unit can move one hex per turn. An Infantry unit cannot make any additional movement when loading or unloading from a vehicle.

[14.2] Infantry Combat

All Infantry units have a specific attack power and range, just like other units. The following special rules apply for Infantry combat.

[14.2.1] Stacked Infantry units may add their attack power for a single attack. This is an exception to [5.1.1].

[14.2.2] If approaching to engage in close quarters combat, the infantry unit can move two hexes. This is an infantry charge. The infantry's movement value remains in hexes and does not become two movement points. For instance, if the infantry unit was charging along a road hex, it can still only move two hexes, and not four (2MP at 1/2MP per road hex = 4 hexes). The infantry's movement is unaffected by the movement cost of the terrain it moves through.

[14.2.3] Defensive attacks against a charging infantry unit are at a -1 to hit, in addition to any other modifiers.

[14.2.4] Some infantry units are equipped with the machine gun (MG). There is no single machine gun in the unit; all members of the squad are equipped with this weapon. Therefore, if the infantry's to-hit roll is a natural (6 and 6), the weapon does not break down.

[14.3] Infantry Morale

When an infantry's durability roll results in an M (immobilized) or A (armament destroyed), the unit's morale is broken. Place a 'Morale Broken' token with the affected unit's token.

[14.3.1] An infantry unit with broken morale behaves in the following ways.

1. It cannot attack. If engaged in close quarters combat or an overrun attack, the unit can only receive attacks.
2. I can only move away from enemy units. If this movement would provoke defensive fire, then the unit cannot move.
3. The unit cannot spot. In any scenario in which the unit must "be able to recognize" a target, the unit cannot satisfy this condition.
4. Any special abilities the infantry are trying to use automatically fail.

[14.3.2] A unit with broken morale may attempt to recover at the beginning of the troop phase on the next turn. To check for recovery, roll one die. On a result of one to four, the unit's morale is recovered and the 'Broken Morale' token is removed. On a result of five or six, the unit's morale continues to be broken. The following modifiers apply to this roll.

1. The broken unit is stacked with another unit with unbroken morale or is otherwise capable of making attacks. -1
2. When located in a forest or building hex, -2. When inside a defensive position, -1
3. An enemy unit capable of making attacks is within 3 hexes, +1
4. The unit's morale was broken when it received additional direct or indirect attacks (show this by flipping over the 'Morale Broken' token), +1

All of these modifiers are cumulative.

[14.4] Special Infantry Units

The Engineer Squad and Anti-AFS Rifle Squad are two special infantry units. Other than the following special rules, all standard rules for these units apply.

[14.4.1] There are three special abilities of an Engineer Squad unit.

The first is land mine detection. When an Engineer Squad is entering a suspected minefield hex of an enemy the phasing player rolls one die. On a result of one to five, the minefield is discovered before the unit enters the hex. If a minefield is discovered, the player may cancel the unit's movement, and chose to move to a different hex. (For rules on land mines, see [19.1])

[14.4.2] An Engineer Squad may also attempt to cause a fire in a block or building hex. The target hex must be adjacent to the unit. A unit attempting to start a fire cannot move or make any other attacks on that turn. At the end of the troop phase, the player rolls two dice to resolve the attempt. If the result is five or less, the attempt is successful, and a fire token is placed in the target hex.

When Engineering Squads are stacked and targeting the same hex, roll the dice only once. The result receives a -2 correction (even if it is a stack of 3 or more). For each additional Engineering Squad beyond the first two, there is a -1 correction to the result (Note: If the modifier is received, none of the assisting units can move or attack in that turn).

See section [19.4] for the effects of fire.

[14.4.3] If, on an enemy turn an Engineering Squad is fired upon, but

does not take damage (-), it may make an arson attempt instead of its defensive attack (see [14.42]). The attempt is made with only a single squad, so no assistance modifiers can be applied.

[14.4.4] The Anti-AFS Rifle Squad was commonly used when the AFS was not available in sufficient quantity. The squad has been specifically trained to fight AFS type units. The rifle carried by the squad is short ranged, but is powerful enough to deliver a killing blow to an AFS. An Anti-AFS Squad consists of four soldiers, their equipment, and a single Anti-AFS rifle. Because the weapon is of type 'L' (laser), if a natural result of (5 and 6, or 6 and 6), the power source of the laser rifle is drained. The unit cannot make an attack using the weapon on the next turn, but may attack normally after that.

(15.0)

Concealment

Use of this rule is up to the players to agree upon. This is an optional rule to be used when required by the scenario, or if agreed to by both players.

[15.4.1] The concealment token of a player's color (printed with an arrow) is used to conceal or stack with their units to confuse the enemy. To conceal a unit or stack's type, place a concealment marker over it. This token is removed once an enemy unit has line of sight on the concealed unit.

[15.4.2] Each player is limited to using a number of concealment tokens included in the game set, and the tokens of their own color. Concealment tokens may be moved between units.

[15.4.3] The player may also conceal the actual size of a stack. All concealment markers in a stack are immediately removed once in line of sight of an enemy unit.

(16.0)

Combat With Unmanned Units

Unmanned weapons have an important place in 29th century combat, and cannot be ignored.

[16.1] Control of Unmanned Units

With several scenarios, a command unit or manned version of a unit (such as the Nutrocker) may appear. While manned these units have an increased movement (for some scenarios†) and range for defensive fire (see the unmanned weapon reference chart). In addition, such a unit can only spot when manned. If there is no command unit an unmanned unit cannot make indirect attacks, or spot for artillery.

[16.1.1] A manned version of a normally unmanned unit is marked with a (PC) in the scenario. In several scenarios there are cases where the (PC) designation is on a unit other than an unmanned unit. In such a case this unit is guiding the unmanned unit, and the rules for [16.1] apply.

[16.2] Collecting Intelligence

[16.2.1] Collecting specific intelligence with a NeuSpotter is a victory condition in several scenarios. The Analysis Memory Unit (AMU) is housed in the lower part of a NeuSpotter, and stores all the valuable information the NeuSpotter collects. Since the AMU could frequently survive the destruction of the NeuSpotter, it became a valuable target to both sides.

[16.2.2] With any scenario after December 2884, any NeuSpotter destroyed on the battlefield drops an AMU in its hex.

The Strahl Troops can obtain 1 victory point by collecting a dropped AMU. In addition, any victory points that would be received for returning the NeuSpotter alive are rewarded (as per the scenario).

[16.2.3] A Strahl Troop player Infantry or Type I unit that enters the same hex as the AMU and ends movement there may collect the AMU. The AMU should be stacked under the unit that collects it. When the carrier unit moves off of the map board with the AMU, collection is a success (the player does not get any victory points for AMU units which are still on the board when the game ends).

[16.2.4] The Mercenary Troop player can prevent collection by entering a hex that contains an AMU and declaring it to be destroyed. The AMU token is removed at once.

[16.2.5] A NeuSpotter that collects a dropped AMU has its movement value reduced by half. For all other units, there is no penalty for collecting an AMU.

(17.0)

Artillery

During the troop phase of each player, it is possible to make artillery attacks using the artillery provided in the scenario.

Artillery attacks are made from outside the map board, and are on a much larger scale than standard indirect fire. The following rules are used to make and resolve artillery fire.

[17.1] Initial order

[17.1.1] The units making the artillery attacks are outside the board, and will never appear on the board. Units on the board must contact them. This communication occurs between a command unit and the off board artillery unit. The command unit can request attacks based on the information from reconnaissance units, but this is more difficult than observing the target directly.

[17.1.2] The following classes of units can request an artillery attack.

1. Command unit
- A unit designated by the scenario
- All infantry Troop HQ units
- All infantry Platoon HQ units

2. Reconnaissance unit
- NeuSpotter, Kröte, Raccoon
- All aeronautical units assigned to ground support

3. All other units not mentioned above.

[17.1.3] To make an artillery attack, units in any of the three categories must have line of sight on the target unit, and can communicate with the off board unit making the artillery attack. At this time, write down the unit making the request, the target, and the type of artillery attack. The spotting unit may not move or attack on the turn it requests the strike, and if it is destroyed before the end of the turn, the artillery attack is not possible.

[17.1.4] The artillery request can be made by any of the three classes of units listed in [17.1.2] independently, or in combination. The five possible combinations are listed below (all other combinations of units cannot request artillery attacks).

a) A unit in group 1 observes and requests.
b) A unit in group 2 observes, and a unit in group 1 requests.
c) A unit in group 2 observes and requests.
d) A unit in group 3 observes, and a unit in group 1 requests.
e) A unit in group 3 observes and requests.

[17.1.5] The player making the artillery attack uses a copy of the Artillery Request Sheet (at the end of this rulebook) to record the type of the request (a - e), the turn of the request, the target map board and hex number, shot type, and the number of shots fired. It is possible to make multiple requests in a turn, but a unit can only participate in a single attack.

[17.1.6] The artillery attack is fired at the beginning of the troop phase following the turn in which the request is made. However, if a friendly unit is in the target hex, the shot is postponed until the unit is no longer in that hex. Attacks that deviate from the original hex and impact friendly occupied hexes are resolved normally and effect friendly as well as enemy units.†

[17.2] Resolving Artillery Fire

[17.2.1] On the turn in which the artillery fire will land, all artillery fire is resolved before any units move or attack. First, find the target number based on the request type (A-E) on the Artillery Deviation Chart. Roll two dice. If the result is below the target number, the attack hits the target hex. If the roll is one or two more than the target, then the attack hits an adjacent hex. Roll one die and consult the chart to determine the direction. If the roll exceeds the target by three or more, the attack fails completely.

[17.2.2] With the impact hex determined, resolved the effect on units using the indirect fire rules (rule [5.5.2] through [5.5.4]).

[17.2.3] For statistics of possible artillery attacks, refer to the Artillery Efficiency Chart.

(18.0)

Pilots

A number of pilots from both sides are included in the game set. Some are used in scenarios, but some of them do not appear in any provided scenario. Players should decide if they want to use these tokens.

[18.1] Pilot Unit

[18.1.1] Between the two games there is a total of 42 pilot units. It is possible to create additional pilots using optional rules (see section [18.3]). The numerical values on the pilot token modify the attack power, defense, and air war power of the unit they pilot.

[18.1.2] For the numerical values, black numbers add to the value, and white numbers subtract from the value. These modifiers affect the to-hit roll for all attacks.

For example, if Isao is attacking with a power of 10, and his correction is -1, and the defense of the target is 5, with a correction of +1, the result is (10-1) – (5+1) = 3. These modifiers are in addition to any terrain modifiers.

[18.1.3] Write down which pilot is assigned to which unit, and place the pilot tokens to the side of the map board. When the pilot's abilities are used, show which pilot is involved in the action. All pilots involved must be revealed before rolling to resolve the attack.

[18.2] Escaping (Optional Rule)

[18.2.1] If a unit with a pilot is destroyed in battle, determine if the pilot has survived.† Roll two dice, if the last hit result was a Disarmed (A) or Immobilized (M), a result of seven or more indicates that the pilot was killed. If the the last hit result was Destroyed (D), the pilot is killed on a roll of four or more. If the pilot is not killed, place the pilot's token on the hex, removing the unit the pilot was in.

[18.2.2] Pilot units on the map are handled the same as other units until the end of the game. Pilot units can move one hex like infantry (unaffected by terrain costs), and their defense is zero. Any result of D, A, or M will kill the pilot. The opposing player receives a number of victory points for the pilot.

[18.2.3] To escape, a pilot must survive to the end of the game. It is possible to retreat the pilot unit off the map board, at which point the pilot will survive for the remaining time. (If the player's units or reinforcements enter from a specific location, the pilot unit must retreat through the same area. Pilots can also escape in the direction of that player's artillery. Leaving the board any other direction, the pilot gets lost and is captured, giving their victory point value to the enemy!)

[18.2.4] A pilot may escape the board while being transported by a vehicle (see [13.1]). A pilot has a stack point value of zero.

[18.2.5] The victory point value of a pilot is +1 for each positive ability point, and −1 for each negative ability point. The pilot's rank is also added to his value, with Junior Warrant Officer as one, Second Lieutenant as two, and Lieutenant Junior Grade as three, each class increases by one point. The Lieutenant Colonel is worth six points. (Additional ranks and values are provided with the scenarios)

-Example-
Heinrich Giger, a lieutenant junior grade, has ability modifiers adding up to 1 + 2 + 0 = 3. Because his rank has a value of 3 is, combination his total value is 6 victory points.

[18.3] Pilot Creation (Optional Rule)

Use the rules below to create new pilots. This is only a suggested method, and players should feel free to agree on other methods of creating pilots.

[18.3.1] There are two types of pilot creation. One is recruitment. The following chart is used to create a pilot with this method. Roll a single die twice. The first determines the ground combat ability. The second determines the dog-fighting modifier. The player may divide the value of the ground modifier between attack and defense.

New pilot creation chart

	Attack, Defense	Dog-Fighting
1	-1	-1
2	-1	0
3	0	0
4	0	0
5	+1	+1
6	+2	+2

Roll one die

[18.3.2] The other method is to use any of the pilots included with the game set. These are veteran pilots.

[18.3.3] The ability modifiers of pilots can be raised based on combat results. For every five units destroyed, other than infantry, one ability may be raised. Use the table from [18.3.1], rolling on the appropriate column for the ability to raise, and adding one to the die roll. Treat negative values as zero, and a roll of seven as a six. Any single ability modifier cannot exceed 4.†

(19.0)

Special Rules

The rules for additional weapons in the game appear here. Each is used as appropriate for the scenario.

[19.1] Land mines

Land mines are assigned to players as an attack power and not individual units. Following the rules of the scenario, the player distributes these mines by recording their assigned attack power, hex, and map on a piece of paper. Artillery deployed land mines are deployed in the target hex.

[19.1.1] Land mines can be assigned an attack value between five and thirteen per hex. This assignment is kept secret, and only revealed for the appropriate hex where a minefield is discovered.

[19.1.2] The anti-phase player must observer all movement of the phase player, to see if any units enter a minefield. The phase player should verify with the anti-phase player that they have not entered any minefields. If a minefield is entered, the anti-phase player declares this immediately and resolves the land mine attack. (see section [14.4.1] for exception)

[19.1.3] The land mine attack is resolved using the attack power of the minefield in the hex, against each unit that has entered. There are no modifiers applied for pilot ability or terrain. For each unit hit by the attack, the standard durability test for that unit is rolled.

[19.1.4] The land mine attack is resolved when a unit enters a minefield hex and when it exits. If a unit tries to pass through two minefield hexes, four attacks will be resolved.

[19.1.5] It is impossible to move or remove a minefield once it is placed. All minefields retain their attack power until the end of the game.

[19.1.6] Artillery deployed mines function the same as standard mine fields, they only differ in their deployment. Follow the standard artillery resolution. A single shot will increase the attack power of a single hex. Multiple shots can be made at the same or different hexes. A minefield increased in this manner cannot exceed an attack power of twenty, and further increase is ignored.

[19.1.7] If an artillery deployed minefield lands in an occupied hex, the unit in that hex is not attacked as long as it does not move.

[19.1.8] Friendly units may pass through a minefield, but the minefield hex must be revealed to the enemy, and the appropriate attacks against the moving units resolved.

[19.2] Smoke screen

The smoke screen token hinders visibility in the hex that it is placed.

[19.2.1] The following units can deploy a smoke screen.

Pzkw 182
D. house
N. Rocker II
Sdh 233/232
Schenkel
Green Buffalo
Ravin
Engineer units

Deployment of a smoke screen can be done at any time during the phase player's troop phase. The unit that deploys the smoke screen can still move or attack in the same turn.

[19.2.2] The efficiency of the smoke screen for each unit is shown on the Smoke Screen Equipment Chart. The chart shows the number of smoke screens that can be created, the range the screen can be created at, and the number of screens that can be deployed in a single turn.

[19.2.3] A smoke screen deployed during the troop phase will dissipate and be removed from the board two turns later, at the beginning of the appropriate player's phase. To show this, place the marker numbered "2", and at the next troop phase, turn the marker over to show the "1" side. The turn after this, the marker will be removed.

[19.2.4] The Pzkw182 and Doll House use their internal combustion engines to create smoke and hide themselves. Because of this, they are marked as having an infinite number of uses. Because of the close nature of this smoke screen, do not use the regular markers.

[19.2.5] Smoke screens block line of sight. It is possible for a unit in the smokescreen hex to fire.

[19.2.6] Smoke screens also make firing more difficult. Laser and missile weapons have a -1 modifier to hit, and all direct fire receives a -4 modifier.

[19.3] Night combat

Because of the loss of visibility in darkness, manned units cannot recognize and react to targets as quickly.

Manned units fighting at night receive the darkness penalty listed in the Fire Modifiers Chart.

[19.4] Fire

There is a possibility for fire to occur in all building hexes. When (1) a missle (M) or gun (G) weapon, or artillery attack hit a building hex and a result of 'D' is produced, or when (2) an attempt at arson is made by an engineer unit, there is a possibility of fire.

[19.4.1] When either circumstance (1) or (2) occurs, check for fire ignition. For circumstance (1), roll two dice and if the sum of the dice are four or less, fire occurs. If the circumstance is (2), decide using the rules in section [14.4.2]. A fire marker is placed if a fire ignites.

[19.4.2] An infantry or pilot unit that is inside a hex where fire occurs is automatically attacked during the enemy fire phase. Roll two dice and add the results to determine the attack power of the fire. Resolve the attack as a direct fire attack. All other units in the game are immune to fire.

[19.4.3] Line of sight cannot be established through a hex whichh contains a fire marker. A unit in the fire hex cannot establish line of sight out of the hex.

[19.4.4] Any fire that begins continues to the end of the game.

[19.4.5] If there is a Depot marker in the hex where a fire occurs, it ignites the ammunition, fuel, and other supplies, resulting in an explosion. Remove the token immediately. Roll one die to determine the number of attacks the explosion will cause. Resolve this number of attacks against every unit stacked with the depot, using the process in [19.4.2]. All units, and not just infantry and pilot units are susceptible to these attacks.

[19.5] Special units

[19.5.1] A unit for Eddy Amzel is provided for the appropriate scenario. Eddy can move one hex per turn, and cannot make any attacks, observe, or take any other actions.

[19.5.2] The Raccoon, and the unmanned Kröte Pioneer have the engineer squad's mine detection ability.† See section [14.4] for reference.

[19.5.3] SAFS Mk. II carries a booster backpack. When moving on the ground, its movement is (5W), and when using the booster its movement is (12B). The controlling player selects whether to use the booster when the unit moves. When using the booster, movement costs and restrictions for the hexes the unit moves through are ignored, and the unit moves at a rate of 1 hex per movement point. The booster pack may be used on any two turns in during single scenario. Even if the full movement allowance is not used, it still counts as a full use of the booster.† Mark this usage with the number tokens. If unit with a booster is Immobilized (M), it can no longer use the booster.†

When using the booster, the unit may not engage in close quarters combat. While it is moving, if it moves into the defensive attack range of an enemy unit, that unit may make an anti-aircraft attack. A unit using the booster may not move through hexes that contain enemy units.†

PERATIONFASER
S.F.3.DII
ORIGINAL

S.F.3.D Rules by TCI

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1.0

Introduction

The following rules are a compilation of the rules written by Twentieth Century Imports (TCI), the company that released the two S.F.3.D Original games in the United States. In the words of the original T.C.I. manual, "The body of the rules is a direct parallel to the original Japanese rule book. The optional rules have been suggested by the American play test team." These rules have some differences from the translation of the Japanese rule set presented previously in this manual. They also present some new rules and concepts that are not part of the Japanese rules, which players may find interesting.

The rules are presented here so that players can decide which core set of rules they prefer to use, and pull elements from the different rule sets that they feel enhances their experience.

2.0

Game Components

The S.F.3.D. game set contains the following :

One Japanese rule book
One English rule book
Two air commitment cards
One combat results cards
Four full color, mounted maps
480 counters
One counter tray
A pair of dice

The S.F.3.D. II game set contains the following :

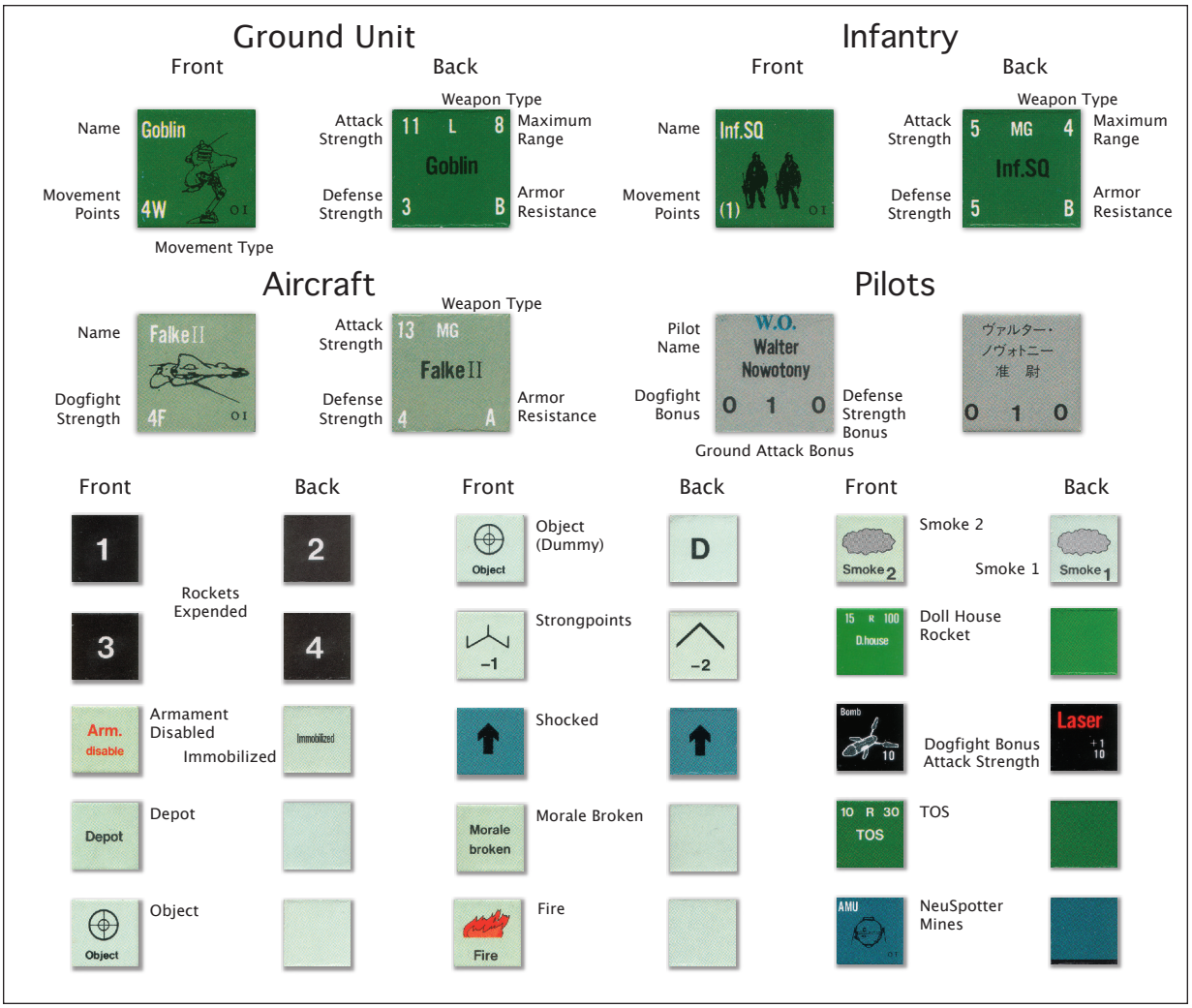
One Japanese rule book
One English rule book
Two air commitment cards
Two combat results cards
Three full color, mounted maps
480 counters
One counter tray
A pair of dice

2.1 Counter Explanation

The front of each unit contains the following information. The name, the number of movement points, the class of movement, and the ID number. The back of each unit contains the attack strength, the type of weapon used, the range of that weapon, the defense strength of the unit, and the armor type.

2.1.1 Aircraft and Infantry counters

Aircraft counters are identified by the movement code 'F'. These counters are slightly different than the usual unit counters. In place of movement points, this number on the front of the counter is the Dogfight strength. On the back of these counters, no range is listed (see 7.4). Infantry have no movement code. The movement points for Infantry are in parenthesis.



2.2 Unit class

All units in the game are grouped into classes. These classes are class I (Suits), II (Vehicles), and III (Aircraft). The units in these classes are as follows.

Type I	Panzer Kampf Anzug (PKA), Gustav, Armored Fighting Suit (AFS), Super Armored Fighting Suit (SAFS), Neu Spotter, SAFS MkII, AFS(S), Raccoon, Konrad, Krachenvogel
Type II	All ground units.
Type III	All aircraft (NOTE: A P.K.A. or Gustav attached to a Hornisse is considered an aircraft until they have separated.)
Inf	All Infantry units

3.0

Sequence of Play

Initiative Determination

Each player rolls a die. The player who rolls the highest number is Player #1. The player who rolls the lowest number is Player #2.

Mutual Air Commitment

Both player secretly commit their aircraft to either ground or air attacks. Once this is done, the cards are revealed.

Dogfight Resolution

All units in each player's air attack box conduct Dogfight combat. Afterwards, any unit eligible may conduct attacks against any opposing aircraft in the ground attack box (see 7.00). Any air attack units that survive are returned to the used box on the Air Commitment Card.

Combat Phase #1

Player #1 Morale Recovery

All of Player #l's units that have a morale broken counter on them may now roll for recovery .

Player #1 Smoke Removal

Each hex that contains smoke laid by Player #1 is reduced by one. This means that a smoke1 counter is removed , or a smoke2 counter is brought down to a smoke1.

Player #1 Aircraft Ground Attacks

Player #1 may now conduct ground attacks with its remaining aircraft. The unit under attack is eligible to return fire on the aircraft. These are simultaneous.

Player #1 Determine Artillery Observation Level

Player #1 now determines the Observation Level of the hex that is to be the target of an artillery attack (see 8.5).

Player #1 Movement

Player #1 may now move any or all units eligible, according to the rules of movement (see 4. 0). Any unit entering an enemy hex must stop and immediately conduct an overrun attack (see 6.5).

Mutual Fire

Any units eligible, from either player, may now fire, according to the rules governing combat (see 6.0). These attacks are simultaneous. Artillery attacks are also conducted.

Player #1 Aircraft Return

Player #1 aircraft are returned to the used box on the Aircraft Commitment Card.

Combat Phase #2

Player #2 Morale Recovery

Player #2 may now try to roll for recovery.

Player #2 Smoke Removal

Player #2 may now remove smoke.

Player #2 Aircraft Ground Attacks

Player #2 may now conduct ground attacks.

Player #2 Determine Artillery Observation Level

Player #2 may now determine the Observation Level of one hex.

Player #2 Movement

Player #2 may now conduct movement.

Mutual Fire

All eligible units may now fire.

Player #2 Aircraft Return

Player #2 aircraft are now returned to the Used box.

End of Turn

Note that one turn has gone by moving the game turn counter forward one space on the game turn track. Play returns to the Initiative Determination phase. If this was the last turn of the scenario, conduct Victory determination.

4.0

Movement

During the movement phase, the phasing player may move some, none, or all of its units that are eligible. The number of movement points and the movement type of each unit are listed on the front of each counter.

4.1 Movement Type

Each unit is grouped by its method of movement into six groups. These groups are Walkers (W), Tank Treads (C) Hovercraft (H), Jump (B), Fliers (F), and Infantry (no code given). These movement types are cross referenced with the terrain type on the Terrain Effects Chart. This will give the movement cost to enter each hex.

4.2 Movement Points

The various terrain types on the map are explained on the Terrain Effects Chart. The map is divided into hexagons, or hexes, in order to regulate movement. Each unit has a number of movement points. This is the maximum number of points each unit can use during each turn. Each hex costs a unit a certain number of movement points to enter. In clear terrain, all units spend 1 MP to

enter a hex. This means that an A.F.S., with a movement allowance of 5, in clear terrain may move five hexes.

Units may not skip or jump over hexes. If a unit enters a hex containing two or more terrain types, the unit must declare which terrain type it will enter. This terrain is used for both movement cost and terrain benefits. The combat modifier for terrain is the same as the terrain entered. (NOTE: The number to the left of the movement code on the flying units is that unit's dogfight strength, not its movement point. Aircraft have no movement points (see 7.00)).

Infantry have only one movement point, and may enter any hex except lakes and rivers at a cost of one. Lakes and rivers may not be entered by Infantry.

The Jump movement is not listed on the Terrain Effects Chart. This movement is a special, low level flight using jump jets. The unit using the jump mode must move using only that mode that turn. The Unit only pays one movement point per hex, and pays an additional one movement point for each hex that is one elevation in height. The unit must pay the full movement cost of the hex it ends its movement phase in.

4.3 Stacking

No more than one friendly unit may occupy anyone hex at anyone time. Friendly units may pass through each other, but they may never end their movement in the same hex. If a unit enters an enemy occupied hex, that unit must come to a halt and immediately conduct overrun combat (see 6.5). The only exception to this is that Infantry entering, leaving, or being carried by trucks may stack with the transporting truck.

4.4 Immobilized Units

A ground unit that has had a 'M' result on the Armor Resistance table has been Immobilized. This unit may not move for the rest of the game. It may fire and spot normally.

4.5 Game Scale

In both SF3D I and SF3D II, each unit counter represents one suit, vehicle, or aircraft. Each Infantry counter represents one squad of 8 to 10 men. Each hex is 250m across, and each turn is about 90 seconds long.

5.0

Range and Distancing

The range between two units is the distance from one to the other, measured in hexes, not in movement points. In order to find the range, count the number of hexes between the firing unit and its target, including the target's hex, but not the firing unit's hex. The maximum range of a unit's weapon is listed, in hexes, on the back side of the counters. Thus, a unit with a range of 8 may fire at a target 8 hexes away, or less. A unit may never fire at a unit that is out of its range.

5.1 Line Of Sight

In order for a unit to fire upon an enemy unit with no adverse modifiers the firing unit must be able to see his opponent. To find if a unit has Line of Sight (LOS) with its tar get , imagine a straight line drawn from the center of the firing hex to the center of the target hex. If the line intersects with any blocking terrain, LOS is blocked.

5.1.1 Blocking Terrain

The hex in which the attacking or defending unit is located does not block LOS. The Crest hex side adjacent to the target or to the attacker does not block LOS. Terrain types that block LOS are listed on the Terrain Chart. If the LOS touches a hex containing any ground unit, LOS is blocked. Both friendly and enemy ground units block LOS. Elevation can affect LOS. Elevation levels of each terrain type are listed on the Terrain Chart. The only terrain feature that effects the elevation of a unit is a hill. This makes the unit at elevation 1. A unit not on a hill is at elevation 0. LOS between two units at elevation 0 and I is only blocked by terrain that has an elevation level of one. Units do not block line of sight in this case (they are at level 0). LOS between two units that are both at elevation one is not blocked.

5.1.2 Effects of Blocked LOS

If an attacker is unable to see its target, it must fire indirectly. Indirect fire has a To Hit modifier of -3 (see 6.2), because the attacker is firing over the terrain. In order to fire indirectly, the attacker must also have a spotter. A spotter is a friendly unit that has LOS on the target. A single spotter may only spot one target per combat phase. The spotting unit may spot and attack at the same time. If a unit was involved in an overrun combat that turn, it may not spot. (NOTE: NeuSpotters may target paint for a +3 modifier, and Raccoons may target paint and spot at the same time, see(8.4)).

5.2 LOS and Laser Weapons

Any unit with the weapon code 'L' is armed with a laser. These units may not fire indirectly. Instead, they fire through the intervening terrain. If LOS is blocked, the firing unit still needs a spotter. Laser units do not have the indirect fire modifier. Instead , they add the terrain modifier for each intervening hex. The defender also gets the terrain modifier for the hex containing the defending unit. Thus, if there are two hexes of forest in between the attacker and the target , the modifier To Hit is -4 (-2 for each hex of forest).

5.3 Effects of Range on Combat

The farther away a target is from the attacker, the harder it is to hit that target. The attack strength of various units at various ranges is given on the Strength at Range Chart. From this attack strength, various modifiers are added and subtracted. (NOTE: The range chart is not used when determining the effects of ground vs. air attacks,or vice versa.)

6.0

Combat

During the mutual fire phase, all eligible units may fire. Each unit may only fire once during each fire phase. A unit may not fire if it fired during the previous Aircraft Ground Attacks phase or during the previous Movement phase. A unit may fire only once per Combat phase. A unit may be fired upon any number

of times. All attacks are considered simultaneous, and the effects of all attacks take place at the end of the current phase.

6.1 Declaring Attacks

The attacker declares all attacks before resolving any. This involves the attacker declaring the firing unit, the target, and, when applicable, the spotting unit. After the attacker has declared all of the attacks, the defender declares all return attacks. These attacks are resolved in any order, but the effects take place at the end of the phase.

6.2 Hit Determination.

In order to determine if an attacking unit has hit its target, the Attack Strength of the attacker is used. The attacker first determines if there is any To Hit Modifier because of the defender's terrain. This is found by cross referencing the attackers weapon with the defenders terrain. This modifier is added to the attackers attack strength. Next, the modifiers for firing indirectly are found on this chart, as for the target being Immobilized, a ground unit firing on an aircraft, smoke, and for infantry unit firing at night. These modifiers are added to the To Hit number. Finally, the defense strength of the target is subtracted from the To Hit number of the attacker. After all of these modifiers have been added, the resultant number is the final To Hit number. The attacker now rolls two dice and adds together the two totals. This dice roll is compared to the To Hit number. If the dice roll is greater than the To Hit number, the attack is unsuccessful. If the total is less than or equal to the To Hit number, than the attack hit.

6.3 Artillery Attacks

The To Hit number for artillery is determined in the Observation Level phase of the Combat turn. The number is found on the Observation Level Chart. This to hit number may only be modified by the targeting of the target hex (see 8.40). If the To Hit number is rolled, the shell landed in the target hex. If the number is not rolled, roll one die, and consult the Artillery Spread Chart. This shows the actual hex were the shell landed. The attack strength of a shell is dependent upon the type of shell, and the distance the units are from the target hex. These strengths are given on the Off-Board Artillery Chart. These attacks are conducted normally, with normal modifiers applying. Artillery attacks are simultaneous with normal ground unit attacks. The scenarios lists the type of shell that may be used, where the shell comes from, and the distance already traveled. The distance traveled has no meaning to the To Hit number, but does show the maximum range the shell can reach on the board. By subtracting the distance traveled from the maximum range, the range of the shell may be determined. This range is counted from the board edge listed in the scenario.

6.4 Armor Resistance

If the target of an attack has been hit, the attacker must determine whether or not the attack damaged the unit. Find the target unit's armor type on the back of the counter. The defender rolls two dice and cross references the roll with the unit's armor type. The result will be either '0', 'A', 'M', or '-'. A '0' result indicates that the target unit has been destroyed. The Destroyed unit is removed from play and set aside. An 'A' result indicates that the units armament has been destroyed, and may not fire its weapon. (NOTE: This does not exclude an air craft from firing any mounted weapons. see 7.51). A 'M' result indicates that the unit is immobilized, and may not move for the rest of the game. Aircraft that receive a 'M' result are shot down, and are removed from play. A unit that receives an 'A' or a 'M' result and has already suffered an 'A' or a 'M' result, whether or not it was received on this turn, is destroyed. A unit that receives a '-' result is unaffected by the attack.

6.4.1 Modifications to the Armor Resistance Chart

If the attacker, during his To Hit roll , rolls a '2' result (ie. double ones) the target is automatically Destroyed. If the attacking weapon is a rocket, then a modifier of one is added to the die roll. If the target unit is a NeuSpotter, then the target is automatically destroyed.

6.5 Ground Units Vs. Aircraft

If, during the Aircraft Ground Attack phase, a ground unit is attacked, that ground unit may return fire upon the attacking aircraft. This return attack is simultaneous with the aircraft attack, and is resolved immediately. The ground unit suffers the modifier for Ground vs. Aircraft, but neither unit receives a modifier for the range. The aircraft does not receive any terrain defensive bonuses, but the ground unit does receive this bonus. If the ground unit in question returns fire, it may not fire again during the current Combat phase, even in an overrun attack. During the Mutual Fire phase, any ground unit may fire at any remaining aircraft on the board. This attacking unit must add the modifier for ground vs. air and for range. It does not add the modifier for terrain. All units have a clear LOS to all ground attacking aircraft .

6.6 Overrun Combat

If, during the Movement phase, a unit moves into an enemy occupied hex, all movement is stopped, and the two units involved immediately conduct Overrun combat. The unit entering the hex is referred to as the attacker, and the other unit is referred to as the defender. The range is found under the 0 range on the Range Modifier chart. The defending unit's terrain is the hex it occupies , and the terrain for the attacker is the hex from which it entered the defender's hex. The units now conduct attacks against each other. As usual, these attacks are simultaneous. If both units survive, they fire again. These attacks continue until both units can no longer fire, one or both units have been destroyed, or until each has fired three times. If both units survive, the attacker must return to the hex from which it entered the defender's hex. These units may not fire during this combat round. During overrun situations, units may, if ammunition restrictions allow, fire during all three combats of the overrun. This is the only time a unit may fire more than once during a combat round. If, in the same movement round, the unit is again overrun, it may not fire. In overrun situations, all 'M' and ' A' results on the Armor Resistance table are treated as '0'

results. All ammunition restrictions are maintained (see 8.1).

6.7 Opportunity Fire

A unit may make an opportunity fire attack if, during the movement phase, the opposing unit moves from one hex that has blocking LOS, into the firing unit's LOS, and ends its movement in a hex that has blocked LOS. All opportunity fire attacks are declared during the movement phase, and carried out during the' current Movement phase. This attack counts toward the limit of one attack per Combat turn. This attack is carried out immediately, before any other movement is conducted, and is at -1. Only the non-moving unit may fire. The moving unit may not opportunity fire. Opportunity fire attacks are always voluntary.

7.0

Aircraft

Aircraft are defined as units with a 'F' movement code. These are flying units, capable of flying ground attack, dogfight, and observation missions. The aircraft are the Falke II, and the Salamander.

7.1 Missions

During the Mutual Air Commitment phase, each player may commit his aircraft to ground or air missions. A player may elect whether or not to commit some, all, or none of his aircraft. The units in the air missions section will conduct dogfight missions. The units in the ground mission section will conduct either ground attack or observation missions. The decision regarding which aircraft in the ground missions box will conduct which missions is decided during the Ground Attack phase.

7.2 Dogfighting

During the Dogfight phase of each turn, all of the aircraft in each player's air mission section of the air commitment card must dogfight. Each player totals the dogfight strength of all of its aircraft involved in the fight, and these totals are compared. The player with the highest total is deemed as the attacker (NOTE: if the dogfight strengths are equal, then the player #1 is the attacker.). The total strength of the defender is subtracted from the total of the attacker. This gives the attack strength difference. This gives the column used on the Dogfight chart. A die is rolled, and its result is cross-referenced on the chart. The first number before the slash is the attackers loss, in dogfight strength. The number after the slash is the defenders loss.

Each side now loses the appropriate amount in dogfight strength. Losses start with the weakest units and work their way up. Excess damage does not carry over. Example: Two Falke II (strength 4 each) suffer a loss of 5 strength. First, one of the Falkes would be destroyed. The second Falke is not lost, for there are not enough remaining points to destroy it. If the loss result was an 8, the Falke would also have been destroyed. If, at the end of the Dogfight phase, one side has a two-to-one superiority, numerically, then some of the dogfighting units may break through and attack the opposing aircraft units in the ground mission box. The player who is able to break through must leave behind at least one unit for each surviving enemy. The rest of the units that were involved in this dogfight phase are free to break through, and thus get a free attack upon the opposing Ground mission aircraft. This attack is resolved using the same method as normal dogfight combat , except that the break through units ignore all attacker losses.

7.3 Observation Missions

Any aircraft in the ground missions box of the Air Commitment card may fly an observation mission. If the aircraft flies an observation mission, it may not also fly ground attack or landing missions. On observation missions, the given aircraft acts as a spotting unit for one ground unit. This aircraft has LOS on any unit on the board, and thus may spot any enemy unit. Units on Observation missions are safe from ground attacks. Observation missions last only one combat turn.

7.4 Ground Attack Missions

Any units in the ground missions box of the Air Commitment card, and not flying an observation mission, may conduct a Ground Attack mission. These attacks are first declared, and carried out, during the appropriate phase. These attacks are carried out as a normal combat, with the following restrictions. Neither unit figures range restrictions for the attack, but the ground unit must use the ground vs. air modifier. The aircraft must add the terrain modifier for the defending ground unit. Both units have LOS on each other, and both attacks are simultaneous. If the ground unit returns fire,this attack counts toward the limit of attacks per combat round unit need not fire. After the attack, the aircraft must remain in the hex it attacked. Aircraft do not count toward the stacking limit of a hex. Any number of aircraft may be in a hex. During the Mutual Fire phase, any unit eligible may fire at the aircraft. All units have LOS on the aircraft, and the range modifiers are applied, as are the ground vs. air modifier. The aircraft does not get any terrain bonuses. When the current combat phase is over, the aircraft are returned to the used box during the aircraft return phase.

7.5 Special Rules for Aircraft

7.5.1 Extra Weapons

Each aircraft may, if specified by the scenario, be armed with additional weapons. These weapons may be missiles, bombs, or lasers. The number listed on the weapon counter is the attack strength of the weapon. If an aircraft uses this extra weapon, it may not fire its own weapon at the same time. Each aircraft can only carry one extra weapon, and bombs and rockets may only be fired once. Lasers may be fired any number of times, and must follow laser rules and restrictions. Lasers also add to the air craft's dogfight ability, by adding one to the aircraft's dogfight strength. The attack strength 8 bombs and missiles are rather small, and so two of them may be carried by one aircraft, both of these must be fired at the same time.

7.5.2 PK 41 Hornisse

The PK 41 counter is not an air craft unit. Only when it is combined with a P.K.A. or a Gustav does it become an aircraft. These two counters fly, attack, and defend as one unit. They use the stats for the PK 41 counter, and if the aircraft is destroyed, both counters are removed.

The PK 41 Hornisse is the only unit that may fly landing missions. The aircraft lands during the ground attack phase, but may not conduct ground attacks during that phase. The PK 41 may only land on Clear hexes. These hexes may not contain units, Friendly or Enemy. The P.K.A. or Gustav may not conduct any actions this turn. At the beginning of the next combat turn, the P.K.A. or Gustav is free to conduct actions. The PK 41 may conduct no action until it is reconnected with a P.K.A. or Gustav. The unit attempting to reconnect with the PK 41 does so during the mutual fire phase, rather than conducting an attack. During the next aircraft return phase, the PK 41 Hornisse is moved to the used box.

8.0

Special Rules

8.1 Ammunition Restrictions

The Dollhouse Vehicle and Goblin is armed both with rockets and a laser. In order to show this, a separate counter is provided for the rockets. This unit may not fire both its laser and its rockets in the same turn. After each rocket attack is used, place a Rocket expended counter on the unit. When the unit has reached its limit, it may make no more rocket attacks. There are other units that also use rockets. These are listed on the Unit Summary Chart, as well as the number of rockets per unit.

The P.K.A. unit uses a special rocket launcher (the PF). Although it uses a special column on the Terrain Effects Chart, it suffers the same ammunition restrictions as other rockets. (NOTE: on the Armor Resistance chart, the PF is not a Rocket). If a P.K.A. starts the Combat turn adjacent to any other P.K.A., it may give its PF's to the other unit.

If a unit armed with a laser rolls an 11 or a 12 on its attack roll, that unit's laser is burned out. An Armament Disabled counter is placed on that unit, and it may no longer fire that weapon. If a unit armed with a MG rolls a 12 on its attack roll, that unit's MG has run out of ammunition. Place an Armament Disabled counter on the unit. That unit may not fire its weapon until it is resupplied. If any unit rolls a 2 on its attack roll, its target is automatically destroyed.

8.2 Special Rules Used in Scenarios

Some scenarios allow one side to have Strong Points. These are non-moving, fortified positions. They add a defensive bonus of -1 or -2, as given in the scenario. This bonus is not given in an overrun situation. In some scenarios, there are objectives that must be found and destroyed. To find if an object is a dummy or a true objective, a unit must move into or through the objects hex. The counter is then immediately turned over. In order to destroy an objective, a unit in the hex must fire at the objective, and it is destroyed. If any enemy unit is in the object hex, the attacking unit may not destroy the object.

8.3 Resupply

If a Depot counter is supplied in a scenario, units may resupply by entering the Depot hex. Depots contain an unlimited amount of PFs, MG ammunition, and vehicle rockets. The unit must remain for one entire combat turn in order to resupply. The Depot is destroyed in the same way as an objective (see above). Each PK 41 contains two PFs, and may resupply P.K.A.s in the same hex. Any units that are overrun while resupplying may not fire during the overrun.

8.4 Recon Units

8.4.1 NeuSpotter

The NeuSpotter is a special recon unit, with no combat ability. But, during each combat turn, a NeuSpotter may either spot two units it has clear LOS on, or spot and target one unit. By targeting a unit, the NeuSpotter allows all units firing at the target this combat turn a To Hit modifier of +3. A NeuSpotter may also spot this targeted unit on the same turn. NeuSpotters may not be shocked (see 9.2).

8.4.2 Raccoon

The Raccoon is a special recon unit, with no combat ability. But, during each combat turn, a Raccoon may either spot two units it has clear LOS on, or spot and target one unit. By targeting a unit, the Raccoon allows all units firing at the target this combat turn a To Hit modifier of +3. A Raccoon may also spot this targeted unit on the same turn. Raccoons may be shocked. (see 9.2) Artillery shots may be targeted.

8.5 Determining Observation Level

The observation level of a given hex is determined by how many people have a clear LOS, and whether or not any units are spotting the hex.

Observation Level	# of spotting units	# of units with LOS	If no units are spotting, # of units with LOS needed
A	1	4	6
B	1	3	5
C	1	2	4
D	1	1	-
E	0	1	-

8.6 Computer Operated Units

Some units are controlled by computer, and are not manned. Usually, unless the scenario states otherwise, these units are controlled remotely. If, for some reason, these units are released from control, their on-board computers take over. These computers, while very sophisticated, are not fast enough for combat situations, and therefore the defense strengths are lowered. The Computer Control Chart lists the defense strengths of the units both Under Control and Not Under Control. In some scenarios, it lists a certain unit as the controller. This unit controls the computer units, and if it is destroyed, all computer controlled units are now considered Not Under Control.

8.7 Land Mines

In certain scenarios, the defender is allowed to place land mines. The location of the mines is recorded, in secret, on a separate piece of paper. The amount of mines that may be placed is presented in the form of attack strengths. This attack strength is divided up into separate mines, each totaling anywhere from 5 attack

strength points to 13 attack strength points. Each mine may be placed in anyone non-building hex. Whenever any ground unit, of either player, enters the mined hex, the mine goes off. The unit in question is immediately attacked at the listed strength. The defence strength of the unit, and any terrain modifiers (bomb column) are included. Once the mine has gone off, the hex is clear. The only ground unit that can enter a mined hex with a chance of avoiding the mine is an Engineer unit (See Below).

Another type of mine is the AMU (Advanced Munitions Unit). The AMU is a large bundle of explosives that can be carried by the Krachenvogel (and the Neuspotter.). Any unit carrying the AMU has its movement allowance reduced by 10. The AMU may be dropped during any movement phase, and it goes off during the next Mutual Fire phase. It attacks all units in the hex it was dropped at a strength of 20, and all units in adjacent hexes at a strength of 10. AMUs will be listed in the scenario that they are used in.

8.8 Infantry and Trucks

Each Infantry counter represents a squad of 8-10 men. There are five types of infantry squads in the game. These are standard infantry Platoon HQ, Company HQ, Anti A.F.S. Rifle (AAR), and engineers (Eng. or Pnr.). Platoon HQ and Company HQ are the commanders for their respective units , AAR squads are laser armed infantry , and engineers are engineers and demolitionists. A few special rules are used for infantry, otherwise, they follow normal ground unit rules.

8.8.1 Infantry Morale

If an infantry unit rolls an 'M' or an 'A' result on the armor resistance chart, the unit now has its Morale Broken, and a morale broken counter is placed on the unit. There are several effects of broken morale. The unit in question cannot attack, except in overrun combat. The broken unit cannot spot, and, during its movement phase, moves toward and stays in the nearest LOS blocking terrain (if there are two or more LOS terrains equal distant from the unit, determine randomly which hex the unit moves toward.). During the Morale Recovery Phase, the phasing player rolls one die for each of their units that are broken. On a roll of 1-4, the Morale Broken counter is removed. On a 5 or 6, the unit remains broken. There are several modifiers to this roll. If the unit is adjacent to a non-broken unit, the modifier is -1, if the unit is in LOS blocking terrain, the modifier is -2, and if an enemy unit is within 3 hexes, the modifier is +2. These modifiers are cumulative.

8.8.2 Headquarters

In general, a platoon consists of 4 infantry, engineer, and/or AAR squads, plus the platoon HQ. A company consists of two platoons and a company HQ. This is not solid, but should be stuck to if possible in the scenario. If a platoon HQ is destroyed, all of the units in that units' platoon are immediately broken. If a company HQ is destroyed, all of the units in the company are broken. When retreating units off board, the HQ must be the last unit off the board.

8.8.3 Engineers

Engineers are special units that have special abilities above their combat ability. There are two special abilities. The first is the ability to detect and disarm land mines. When an engineer enters a hex that it believes is mined , it may roll one die. On a 1-5, the mine, if it is there, is disarmed. On a 6, the mine goes off. An engineer may not fire on the same turn it searches for mines, nor may it have been transported by a truck. The other ability is to destroy bridges (and other structures, see scenario). It takes two full turns to destroy a bridge. If the engineer is destroyed before the bridge is, the bridge is not destroyed. A second Engineer may finish the Demolition. Any unit on the bridge at the end of the movement phase is destroyed, and that bridge may no longer be used. An engineer may not attack when destroying a bridge.

8.8.4 Trucks

Trucks and Kraftwagens are designed primarily for carrying infantry. One truck may carry 2 infantry units at a time. Infantry may off load from trucks at any time during the movement phase. Infantry may on load onto a truck if they start the movement phase in the same hex as the truck. The trucks movement points are reduced by 3 for that phase. If a truck is destroyed while carrying infantry then the infantry are also destroyed.

8.8.5 Heavy Machine Guns

Heavy Machine Guns (HMG) are crewed weapons used by a squad of infantry. They increase the attack strength by one, and increase the range by two. HMG cannot be used by AAR squads. Some combats occur at night, which will be stated in the scenario. Most units, because of their sensors, are not affected by night. But infantry are affected by night, and the modifiers are listed on the To Hit Modifier Chart.

8.9 Units Armed with Smoke

Some units carry smoke rounds that may be used instead of normal rounds. These units are listed on both the Unit Summary Chart, and the Smoke Chart. The Smoke Chart lists the number of smoke rounds the unit has , the range (in hexes) that the smoke can be fired, and the duration. If a unit wishes to fire smoke, it does so during its own Mutual fire phase, and may not fire any other weapon during that phase.

9.0

Optional Rules

The following are optional rules. They are not necessary for play, but they add to the flavor of the game. Any all of these rules may be used.

9.1 Stacking

More than one friendly unit may now occupy a given hex. The stacking limits are as follows. No more than four aircraft may occupy a single hex. All ground units have a stacking size. This size is the unit class number. There cannot be more than four class numbers in a single hex (ie. four class I, or two class II, or one class II and two class I etc.). If an attacker is firing into a hex that contains more than one unit, The attacker singles out one unit as its target, and conducts fire normally. If the attacker's weapon is a Rocket, Bomb, or Missile, the non-targeted units in the hex suffer spillover fire. The units suffering spillover fire are

each attacked separately, with a modifier of -2.

9.2 Shock and Panic

If, at any time, a unit is hit by an attack , whether or not the attack penetrates the units armor, that unit is shocked. A unit is also shocked if three or more attacks are resolved against the unit in one turn, whether or not these attacks successfully hit. Only unit class I units may be shocked. Shocked units may carry out no actions until the shock is released. Any simultaneous attacks may be conducted. P.K.A.s and Gustavs are not affected by shock if they are attached to a PK 41.

9.3 Recovery From Shock

At the beginning of each Combat Phase, all shocked units must roll to recover from shock. The owning player rolls a single die. If the result is a 1, 2 or 3, the unit's shock has been released, and the unit may now conduct actions freely. If the result is a 4 or 5, the unit remains shocked , and may conduct no actions this Phase. If the result is a 6, the unit panics, and the result of the unit's panic is resolved immediately (see below).

9.4 Panic

If a unit panics, one die is rolled. The effects of the panic are listed below, and resolved immediately.

Die Roll	Result
1	Unit recovers and is free to conduct actions this Phase.
2,3	Unit moves towards the nearest cover (ie a hex that contains LOS blocking terrain) and remains shocked.
4	Unit moves toward the nearest enemy unit and attempts to overrun. This unit is no longer shocked, but may not conduct any other action this Phase.
5	Unit does not move now, and fires at the nearest unit (whether they are friend or foe). This unit remains shocked.
6	Unit's pilot makes a fatal error in suit control. Suit explodes (unit is eliminated). All other units in the same hex as the exploding unit are attacked at an strength of 7 (less any modifiers) Resolve damage immediately.

9.5 Pilots

There are several pilot counters supplied in the game. Before the scenario begins, the player randomly assigns one pilot to each aircraft. P.K. 41 Hornisse are not assigned pilots. Each counter lists the name, rank, dogfight bonus, ground attack bonus, and defense bonus of the pilot. If the number is white, the bonus is negative. The first number is added to the dogfight strength of the unit, the second number is added to the attack strength of the unit, and the third number is added to the defensive strength of the unit.

9.6 Fire

If the fire optional rules are used, the wind direction must be determined before the scenario begins. Determine this by rolling on the Artillery Spread chart. The wind direction is used to determine the direction of fire spreading, and where the fire produces smoke. Whenever a laser weapon is fired at or through a forest hex, two dice are rolled. If the total is 7 or more, a fire is started, and a counter is placed in that hex. When a fire is started, three smoke counters are placed. One counter is placed downwind, and the other two are placed on both sides of the first smoke, adjacent to the fire hex. These smoke counters always remain. During the Initiative Determination phase, player #1 rolls two dice for each hex that contains a fire. If the result is a 5 or less, the fire (and any smoke associated with it) is removed. If the result is 10 or more, the fire spreads to one of the three smoke hexes, determine randomly. Any unit passing through or stopping in a hex containing fire is attacked with a strength of 8. Range and terrain modifiers do not apply. NOTE: Infantry in a fire hex have a defense strength of 0.

9.7 Miscellaneous Rules.

P.K.A.s are allowed to fire both of their PFs on one turn if the attacks are on the same target. Gustavs are allowed to carry a P.K.A. grenade launcher. Each Gustav carries 2 PFs, and fires these at the same attack strength and range as the P.K.A.. All destroyed Class II units are left on the map as wreckage. Wreckage blocks LOS, and each destroyed unit in a hex adds one movement point to the cost of the hex. Aircraft cause no wreckage. Class II units may now enter buildings. Each hex costs 5 Movement Points to enter (This simulates the tanks breaking through the wall to get at the annoying little suits).

10.0

Combining SF3D II with SF3D

In order to combine SF3D with this game, these rules are used, rather than SF3D I. Additionally, SF3D I has special rules pertaining to certain units, such as the Neuspotters, and the Hornisse. These rules have been worked into this rule set. The Charts contained in this game include all of the units from the first game.

11.0

Scenarios

NOTE: Scenario sheets based on the Japanese scenarios and updated with the TCI rules are listed as "TCI #". The original rules text is provided here.

These instructions for the scenarios are to be used with the Japanese scenarios. Use the map configurations from the original scenarios, as are the orders of battle. The German troops are contained in the first box, the Australians are in the bottom box, and are usually divided into two or more groups. These groups are referred to as Group 1, Group 2, etc. and are numbered left to right, top to bottom. Special rules and Victory conditions are listed here. If the scenario refers to the Standard Victory Conditions, that means each side receives the victory points listed on the Unit Summary Chart. An immobilized unit is worth half the victory points.

#1 Operation: Search Party

A German frontal assault upon the area HQ, which has recently been reinforced by two platoons of S.A.F.S.s. German group 1 starts in the air, German group 2 enters on any 1 board edge on any 1 turn. Australian group 1 may set up anywhere. 3 of the 5 object counters are dummies. The five object counters must be set up in buildings. Each object counter must be within 3 hexes of at least one other object counter. Victory Conditions: The Germans must destroy both '0' object counters. The Australians are to prevent this. This scenario lasts 10 turns.

#2 Rescue 34th A.F.S. Platoon

The 34th A.F.S. Platoon is caught by surprise during a rest break and is completely surrounded. The 48th New South Wales Guard are sent in to break through and rescue the 34th. The German group 1 may enter the board on the east side, or set up in the building that contains hex 2404. The aircraft are allowed four extra weapons. The Australian group 1 is placed in the building that contains hex 2006. Australian group 2 enters on turn two on the west edge of the map. Victory Conditions: The Australians must move 5 A.F.S. off the west edge of the map. These units may not leave until turn 5. The Germans must stop this. This scenario lasts 10 turns.

#3 Operation: Fast Track

An assault upon a weak flank by the City of Darwin Yeomanry is not the compleat surprise expected by the Australian Command. German group 1 may set up anywhere east of hex column 04XX. Australian group 1 enters through hex 07. Two of the three object counters are dummies. Australian group 2 enter on turn 4. The Australians get the initiative on turn one. Victory Conditions: The Australians must exit two units off the board via hex column 27XX, or destroy the German Object counter. The Germans must stop this. This scenario lasts 12 turns.

#4 Battle of McCormick's River

The front line had stabilized and strengthened. Major Ed 'Mad man' McCormick decided to attempt to break the local stalemate by crushing the German line. German group 1 sets up on map 4. German group 2 sets up north of the river. Australian group 1 sets up south of the river. The Australians get the initiative on turn one. The river is the dark line that starts on hex 07 and leaves on the east edge of the map board. See the Terrain Effects Chart for the effects. The hexes 0807, 1209, and 2007 are bridge hexes, and are considered clear. Any 'H' class units hit over a river hex are automatically destroyed. German units may escape off the north board edge. The Australians get half the victory points for these units. Victory Conditions: Standard victory points. One side must have 6 or more victory points, otherwise it is a draw. This scenario lasts 8 turns.

#5 Operation Super Hammer (Part 1)

Australian command begins a daring move. A direct assault to relieve the siege of New Canberra. The main body of the 3rd Mechanized division met the encamped 25th Panzer Group. German Groups 1 and 2 set up in the forest that contains hex 2008 or in the building containing hex 1607. Two of the Kröte from this group may set up anywhere on map 4. German group 3 enters the north edge on turn 3, and group 4 enters the north edge on turn 5. Australian Group 1 enter the south edge of map 4, group 2 enters on turn 3, and group 3 enters on turn 5. Victory Conditions: Standard Victory points. Higher total wins. This game lasts 16 game turns.

#6 Operation Super Hammer (Part 2)

The 3rd Mechanized, after a bloody exchange, began to fall back into more favorable defensive terrain. When their relief arrived, the Australian withdraw turned into an German nightmare. German group 1 sets up on map 3, between hex columns 16XX and 26XX. Group 2 arrives on turn 1, in the air. Australian group 1 sets up on map 3, between hex columns 05XX and 14XX. Group 2 enters on the west edge of map 2, on turn 4. The Nutrockers, on turn one, may appear (land) on any unoccupied hex on map 3. They may take no action on the first turn on the ground. Victory Conditions: Standard Victory points. This scenario lasts 15 game turns.

#7 Breakthrough at New Canberra

Meanwhile, east of the city, a small armor unit successfully broke through to the city. German group 1 is placed anywhere on map 2, group 2 is placed on map 2, in or within 2 hexes of the building. Group 3 starts in the air, and group 4 enters the west edge of map 3 on turn 3. Australian group 1 enters the east edge of map 2 on turn 1, and group 2 enters the east edge of map 2 on turn 3. Victory Conditions: Standard Victory Points. If there are no German units on map 3 by the end of the game, the Australians get double the victory points. This scenario lasts 12 turns.

#8 Hold Out!

Supplies and Relief for New Canberra are on the way, but so are the German reinforcements. German group 1 enters on the east edge of map 2, and German group 2 enters on the south edge of map 4. Australian group 1 sets up anywhere but 4 hexes from each of the German entrance edges. Victory Conditions: If the Australians still have men on map 3 by the end of the game, they win. The Germans must stop this. This game lasts 14 turns.

#9 Assault New Canberra Supply Storehouse

The Australians were slowly taking New Canberra, but the German resistance could not be stopped, unless the supplies from outside the city were stopped. German group 1 sets up anywhere on map 3. Groups 2 and 3 start in the air. Australian group 1 enters on the north edge of map 4. Group 2 starts in the air. Victory Conditions: Standard Victory Points. If one side is the only side that has units in the building on map 3, that side gets 4 Victory points. This scenario lasts 10 turns.

#10 Battle of New Canberra

January 11, 2885: The German forces in New Canberra defend their last supply source in the city, a group of Military warehouses. After the loss of this supply center, German Command was forced to withdraw from New Canberra. German group 1 sets up in the buildings that contain the hexes 1309 and 1312. The following reinforcement groups enter on the hexes 0914 and 1714. Group 2 appears on turn 2, group 3 on turn 3, group 4 on turn 4, group 5 on turn 5, and group 6 on turn 6. Australian group 1 sets up anywhere but buildings 1309 and 1312. The following reinforcement groups enter on the hexes 0201 and 2301. Group 2 appears on turn 1, group 3 on turn 2, group 4 on turn 3, group 5 on turn 4, and group 6 on turn 5. Victory Conditions: A building is controlled by a player if the player is the only player with troops in the building. The winner of this scenario is the player who controls both building 1309 and 1312. Otherwise it is a draw. This scenario lasts 10 turns.

#11 Flare Furmer

A German Infantry platoon is escorting supplies through a rear area when it is attacked by a small breakthrough force. German group 1 enters the map on the road containing hex 0914. All of the infantry and the three depots must start in the trucks. The depots may not leave the truck, and count for one infantry squad when in trucks. German group 2 is an Artillery attack that begins on turn 8, from the south edge, it has traveled 60 hexes. There are four attacks, and up to four attacks may be made per turn. They are type I shells. Australian group 1 enters the map on the north edge, west of hex 1600. The Australian player gets 30 pts. of mines to be placed anywhere except the road. Australian group 2 enters the map on turn 3, on the north edge. The German player must get two of the depot trucks off the east edge of the map. If the German player fails in this, the German player must destroy 2 times the VP in enemy units than it loses. The Australians must stop this, and may retreat off of the north edge. This game lasts 8 turns.

#12 Fire Fight

This is a typical fire fight between units during the Australian conflict. German group 1 enters the map on turn 1, on the north edge, east of hex 1801. One of these units is a controller. German group 2 enters on turn 4, on the north edge, east of hex 1900. German artillery starts on turn 5, on the north edge, traveled 100 hexes. There are 10 rounds, up to two may be fired per turn. They are fired from Sphinx, Attack 16, range 120, Rockets. Australian group 1 enters the map on turn 1, on the south edge, west of hex 1214. Australian group 2 enters the map on turn 3, on the south edge. Australian artillery starts on turn 1, on the south edge, traveled 60 hexes. There are 20 rounds, up to two may be fired a turn. They are type II shells. To win, at the end of the turn, one player must control three of hexes 1509, 1612, 1711, 1811, 2209. This scenario is a draw otherwise. This scenario lasts 10 turns.

#13 Militia Holds the Line

The 12th Militia attempts to fend off the assault of the 134th Armored Regiment. German group 1 enters the map on turn 1, on the west edge of map 6. Each Konrad has 2 PFs as well as its laser (Attack 10, Range 4). One of the Konrads is the controller. German group 2 enters on turn 4. Australian group 1 starts anywhere on map 6. Group 2 starts .on map 5. Australian group 3 starts on turn 3, at an unknown location. On turn 3, the Australian player rolls one die. If the result is 1-2, east edge of map 5, 3-4, south edge of map 5, 5-6, east edge of map 6. Each Pak Kröte and Makel have 2 PFs stored. A Konrad must spend 2 MPs to get them. If the Australian Platoon HQ is destroyed, all infantry on map 6 must retreat to map 5. The Depot is worth 6 VP. High VP total wins.

#14 Canadian Invasion

Because of the victories of the Rebel Mercenaries, many of the new colonies began to think of rebellion. In order to stop this, The German command started an invasion of Canada, the most rebellious of the colonies. As usual, the Australians were already there. German group 1 enters on turn 1, on the south edge of map 6, west of 0914. Two of the Konrads are controllers. German group

2 enters on turn 2, on the south edge of map 6, west of 0914. Australian group 1 starts on map 6. Australian group 2 starts on map 5. Group 3 may start on turn 3, on the east edge of map 5, if the player wishes to lose 20 VP. Group 4 may enter on turn 6, if the player wishes to lose 10 VP. The Australians get 140 pts of mines to place anywhere east of hex row 13XX of map 6. On turn 2, the Australians get artillery: From east edge map 5, traveled 42 hexes, 14 rounds, 3 per turn, Type I shells. From east edge map 5, traveled 60 hexes, 6 rounds, 1 per turn, Type II shells. One object counter may be carried per truck. Each truck retreated off of east edge of map 5 is worth 10 VP. The entire map is snow-covered. All 'W' types, except Krote, have 3 MP, all 'C' types, except Green Buffalo, Ravin, and PzKw 182, have 4 MP. The Germans win if they retreat 100 VP off of the east edge of the map, or if they are ahead of the Australians by 25 VPs. This game lasts 20 turns.

#15 Airborne Raid

The 18th Airborne was dropped behind the lines in order to raid McCormick Airbase. German group 1 is airdropped into the area. They may be placed anywhere on the map that they are able to enter, and may not fire on the same turn that they land. Australian group 1 starts anywhere on the map. Australian group 2 enters the north edge of the map starting on turn 2, two units at a time. The player may choose which two appear each turn. The six buildings on hex row 24XX are hangers. They have a defense of 5, and must be empty to attack. If they are hit, they are automatically destroyed. The German player gets 10 VP each. The winner of this scenario is the player who has 10 more VP than the opponent. This scenario lasts 10 turns.

#16 The Rescue of Major Pierce

Major Pierce, commander of the 44th A.F.S. Battalion, was captured in a surprise attack on the 44th's base. The 90th All Mercenary company went in for a rescue. German group 1 starts anywhere on map 7. German group 2 starts anywhere on map 6. The POW counter is placed anywhere on map 7. Australian group 1 enters on turn 1, the east edge of map 6. Australian group 2 enters on turn 5, the east edge of map 6. On turn 2, the Australians get artillery. From east edge of map 6, traveled 70 hexes, 12 rounds, 1 per turn. The shells are type II. The F-Boots have no smoke. Any Australian unit that moves into the hex containing the POW may pick up the POW. If the unit carrying the POW is Destroyed, The POW is killed. The Australians get 10 VP for the POW. The German player may not move or kill the pow. The higher VP total wins. This scenario lasts 15 turns. (Note: Our play testers noticed that the POW was worth very few VP, and recommended that he be worth 30 VP, and not be kill-able, instead abandoned KH).

#17 Battles Won and Lost

The city of Bedford became the sight of one of the bloodiest battles of the war. The Germans dug in, and the Australians dug them out. German group 1 starts anywhere west of hex row 22XX on maps 1 and 7. German group 2 may enter on turn 6. Before this group arrives, roll one die. On 1-2, the Konrads are not accompanied by the Hornisse, and enter on the west edge of map 1. If German group 2 enters the game, the player loses 10 VP. The Germans get 100 pts. of mines to be placed anywhere. On turn 2, the Germans get Artillery: west edge, traveled 80 hexes, 15 rounds, 2 per turn, Type II, West edge, traveled 200 hexes, 6 rounds, 2 per turn, Type III, West edge, traveled 80 hexes, 6 rounds, 2 per turn. Australian group 1 enters the map on turn 1, on the east edge of the boards. Group 2 enters on turn 3, east edge, group 3 enters on turn 6, east edge; group 4 enters on turn 9, east edge; and group 5 enters on turn 12. The buildings containing hex 1106 on map 7 and hex 1307 on map 1 are worth 30 VP each if one player is the only player with units in the building. High VP total is the winner. This scenario lasts 15 turns.

#18 Stop Them at Colonier

The 711th A.F.S. Battalion began moving toward La Grange spaceport, where mercenary units were collecting for an assault. The city of Colonier was ordered to stop the 711th. German group 1 sets up anywhere east of hex row 07XX on map 6. German group 2 sets up anywhere on map 5 or 6. The infantry is a controller. Australian group 1 enters on turn 1, west edge of map 6. The Australians must retreat 40 VP worth of units off of the east edge of the board, or gain 2 time the VP of the German player. The German player must stop this. This scenario lasts 15 turns.

#19 Hill 91

Hill 91 was a high-point occupied by the controller of the 17th Automated Company. The 331 AFS Company was ordered to take the hill. German group 1 sets up anywhere on either map. The infantry squad is the controller. Australian group 1 enters on turn 1 on the north edge of map 4. The Australians win if they have a unit on the hill, Hex 2205, map 6 at the end of the game. This scenario lasts 10 turns.

#20 Prologue to "Faserei"

One of the opening battles of Operation Faserei, the final resistance of the now cut-off German invasion force in Canada. German group 1 sets up anywhere within 16 hexes of the east edge. German group 2 enters on turn 4. Group 3 may enter on turn 6, and

is airdropped. These units may be placed anywhere it is possible for them to enter. These units may not fire on the turn they are placed. The player loses 5 VP if these are used. Australian group 1 is placed anywhere on maps 2 or 4. Group 2 may enter on turn 3, from the west edge. The player loses 5 VP if these are used. Group 3 enters on turn 5. The Australians have artillery: West edge, traveled 60 hexes, 15 round, 2 per turn, Type II shells; West edge, traveled 100 hexes, 10 rounds, 2 per turn, Type III shells. Three of the German object counters are real. Each real object destroyed is worth 15 VP. The highest VP wins. This scenario lasts 15 turns.

#21 Operation Faserei

The German invasion force had pulled back into the Alberta area. They were surrounded and attacked. German group 1 begins anywhere on maps 1, 5, and 7. Three of the Gustavs are controllers. All of these Konrads and Gustavs have 2 PFs. German group 2 enters on turn 3. German group 3 enters on turn 9, on the east edge of maps 1, 5, and 7. The Germans get 280 pts of mines on maps 3, 4, 5, and 6. The Germans get artillery on turn 1: From the east edge, traveled 70 hexes, 30 rounds, 2 per turn, Type II shells; East edge, traveled 150 hexes, 10 rounds, 1 per turn, Type III shells; East edge, traveled 65 hexes, 15 rounds, 3 per turn, Type IV RM shells. Australian group 1 enters on the west edge, and on the north edge of map 6. Group 2 enters on turn 4, on the west edge, and on the north edge of map 6. Group 3 enter on turn 6, on the north edge of map 5, or on the south edge of map 4, player's choice. The Australians get artillery: From the west edge, traveled 60 hexes, 40 rounds, 2 per turn, type II shells; on the west edge, traveled 100 hexes, 6 rounds, 1 per turn, Type III shells; on the west edge, traveled 4 hexes, 5 rounds, 2 per turn, Dollhouse rockets. If there are no mobile German ground units on any of the boards at the end of the game, the Australian player gets 20 VP. The Germans may retreat units off of the East edge of the map. To win this scenario, a player must have 20 more VP than their opponent. This game lasts 30 turns.

#22 After The Holocaust

The 192 Panzer Company, one of the few units left relatively intact, had been chased across Canada into Ontario. While waiting for their ship, their camp was attacked. The scouts of the 192 returned, to find the enemy dug in. German group 1 starts anywhere on map 5. The Gustavs have 2 PFs, and one of the Nut Rockers is a controller. German group 2 enters on turn 1, from the west edge of map 4. One Nut Rocker II is a controller. The German player gets 100 pts of mines anywhere on map 5. Australian group 1 starts anywhere on maps 3, 4, and 6. Both the Company HQ and the Schenkel are Company HQs, and both must be destroyed before the effects of destruction of an HQ occur. The Australians get 240 pts of mines to be placed anywhere on maps 3, 4, and 6. The Australian gets Artillery: from the north edge, traveled 72 hexes, 4 rounds, 2 per turn, Dollhouse rockets. On turn 13, the Germans may begin to retreat units off of the east edge of map 5. Any units that leave the map before then, or any German units left on the map after turn 16 are considered destroyed by the Australian player, and count for VP. The winner is the player with the most VP. This scenario lasts 16 turns.

S.F.3.D Fan Expansion

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1.0

Introduction

From the Introduction page of the original project site:

> "This website is devoted to mainly the gaming side of both SF3D and 2887™, with background notes, history and rules where necessary. To be get the most out of this site, you must have a copy of either SF3D I or II. The TCI translated rules have been used mainly for these pages as I don't read Japanese. However, if you can get hold of a translated rules set, then you'll find it contains much more than the TCI rules ever did."

The following is a collection of fan-created material intended for the English-edition S.F.3.D game releases by Twentieth Century Imports. The main creators of this content were Francis Greenaway, Jim Meggonhofen, Frank Savino, and Bayne McGregor. Some of the rules recreate elements that are in the Japanese rules, but were missing from the TCI edition. It also adds some rules that are meant for the TCI edition, but would be compatible with the Japanese edition as well. Two scenarios (numbered 'x #') and a small selection of additional units are also included.

At the time of this writing, the original site is no longer available, but a partial copy is hosted by Kevin Futch at http://futchfactor.com/resources/sf3dgaming/.

A snapshot of the original pages can also be found on the Internet Archive Wayback Machine by searching it for http://www.bus.bton.ac.uk/staff/fesg/games/sf3d/rules/index.html.

2.0

Strahl PKA Hand Held Weapons

The PKA suit is at a serious disadvantage when playing games that don't include the PK41 or supply depots. While the panzerfaust is a relatively powerful weapon at close ranges, the fact that it is only a close range weapon, and that only two of them are carried means that the standard PKA soon loses it's ability to fight.

To improve the state of the PKA, they may carry a different hand held weapon instead of one panzerfaust. The weapon options include:

Weapon	**Damage**
Hand held laser	6 L 8
The laser burns out on an 10,11 or 12	
Hand held cannon	8 MG 6
The cannon runs out of ammo on an 11 or 12	

A unit with one of these weapons may still carry one panzerfaust, but may not use it in the same turn as it fires the hand weapon. The Gustav may not use these weapons at all as it only has one hand actuator, the other containing the in-built laser.

3.0

Physical Combat

PKA suits run out of ammunition quite quickly, and many other units either also run out of ammunition eventually or burn out their lasers. When this happens, the unit is effectively reduced to spotting or becoming a target.

This rule allows a unit with no weapons left to try and engage an enemy unit in physical combat. If it survives of course. Note that a unit may engage in physical combat even if it does has weapons left. This is brutal combat, where the two units are clubbing each other, kicking, charging and trying to inflict damage by any means possible.

To be applicable for physical combat, two units have to be in the same hex (thus overrun combat may have already occurred - possibly the reason for the close combat?), and if this is the case, then after ALL shooting combat has occurred, physical combat may happen. This means that the unit may not survive the turn to be able to conduct physical combat. A unit may engage in physical combat even if it has conducted shooting combat in the turn.

To conduct close combat, both units roll 1D6 and add the following modifiers.

+ the defence strength of the unit

+ physical combat modifier if the unit is not good at physical attacks (see list below)

+2 if the unit is immobilised

Then with this modified number, consult the Armour Resistance Chart and cross index the number with your units armour letter. The result is the damage that your unit sustains in combat. It is possible for both units to destroy each other or inflict no damage.

Sometimes a unit doesn't want to engage in close combat, and instead may try and evade it. This can only be done if the unit isn't currently immobilised. In this case, the unit evading gets a +2 to it's roll, and the opponent does not have to make a roll at all, meaning that it cannot be damaged in the physical combat.

The various units pages lists all the relevant physical modifiers for the units in the game, but as a rule, a normal armoured suit will have a -0 modifier, a walker with limited physical potential (like an HAFS Jerry) will have a -1 modifier, and a unit that cannot engage at all (like an armoured vehicle, such as the Nutrocker) will have a -2.

Any fliers and NeuSpotters (or variants) may not be engaged in physical combat at all.

Some examples:

A PKA suit and an AFS engage each other in physical combat, and both survive the turn to see the combat through.

The PKA rolls a 6 and adds 2 for it's defence. This is an 8, which is a no effect on the chart (because it only goes up to 6!).

The AFS rolls a 2, and adds 2 for it's defence. Consulting the armour chart, under B for the suits armour class, a result of 4 is an M, thus the AFS is now immobilised.

An AFS decides to attack a Nutrocker in physical combat.

The Nutrocker rolls a 1, and adds 4 for it's defence. However, the Nutrocker has a -2 for being completely incapable of physical combat, so the end result is a 3, which according to the chart under armour class A, denotes that the Nutrocker is now immobilised.

The AFS also rolls a 1, and adds 2 for it's defence rating. This is enough for the AFS to be destroyed, so probably the AFS tried hitting the Nutrocker which crushed it underneath itself, resulting in it's immobilisation.

A Kröte decides to attack a Sand Stalker. The Sand Stalker however has other plans, and decides to evade the Kröte, thus not attacking it.

As a result, the Kröte need not roll for damage, so it survives the combat. The Sand Stalker rolls a 4, adds 2 for evading and 1 for it's defence, which gives a total of 7, so it escapes unharmed also.

4.0

Ranges to Ground Attack Aircraft

This is just a bit of a small clarification, which most people would probably use anyway. In the rules, it states that in the mutual combat phase, ground attack aircraft can be attacked by ground units at normal range modifiers. However, as ground attack aircraft aren't placed on the map, there can be a bit of a discussion as to what this range really is.

So, what we do, is to use the range between the current firing unit, and the target of the ground attack aircraft that is the current target of the firer. This means that a marker has to be placed on the map if the target of the ground attack aircraft has already been destroyed. Or to put it another way, when a ground attack aircraft is declaring its target, simply put the aircraft counter in the same hex as it's target.

This seems to make sense as a ground attack aircraft and its target don't ever use range modifiers, so for simplicities sake, all vertical ranges have been ignored.

5.0

Multi-Attack Vehicles

Some vehicles, especially with the advent of the naval ships and the MAK 2887 vehicles, contain a range of weapons, and the ability to use a lot more than one of them per turn.

A vehicle so designed will have an 'Attacks' rating listed in the weapons section on the units chart. This number will is the total amount of attacks that the vehicle may perform in one turn, and these attacks may be at the same or different targets.

Each weapon and rocket code will also have a number in parenthesis after the code (for example 8 L 8 [1]) which is the amount of weapons of that particular the vessel has. No weapon may be fired more than once regardless of the amount of attacks that the vehicle has.

6.0

Multi-Hit Vehicles

Some vehicles are also much larger than others and able to survive more than one successful weapon attack them.

On the new unit tables, a vehicle with more than one hit has a number in parenthesis after the armour code, such as C(2). The number is the number of hits that the vehicle can survive.

Every time a vehicle is hit, roll for damage as normal, but if a letter is rolled on the armour resistance chart, consult the following table:

D: The vehicle is damaged. It loses one hit, and may suffer further damage effects. Roll 1d6:

1-3	The vehicle loses one weapon system (owning player chooses)
4-6	The vehicle loses motive damage, and has it's available MP reduced by 1/4 of its maximum value.

M: The vehicle suffers one hit damage, but no further effects.

When a vehicle takes an amount of successful hits equalling the hits it can take, it is destroyed.

A multi-hit vehicle will still be destroyed by rolling a 2 to hit.

7.0

Size IV Vehicles

Some vehicles (namely the ocean going vessels, but some large ground vehicles as well), are just much larger than normal. These are termed sized IV vehicles, and are treated as normal vehicles except that they always leave wreckage when they are destroyed (except ships usually sink and can be ignored), and being as large as they are, no other unit may enter the same hex as them, they completely fill it.

8.0

Troop Transports

Some vehicles have the capacity to transport troops, and these will be termed transports in the units page, along with the amount of troops that can be moved by the vehicle.

8.1 Loading Up

To be able to load up on troops, a transport vehicle must be stationary for the entire turn, although it can fire as normal. The troops themselves must end their movement in the hex with the transport and they may ignore normal stacking rules as the troops are considered entering the transport vehicle. Of course, if the vehicle is full, then normal stacking rules apply.

On the next turn, the transport may move as normal.

8.2 Destruction of the Transport

If the transport is hit and destroyed while carrying troops, then all units onboard must roll on the armour resistance chart as though they had been hit by rockets (thus with a +1 modifier). If they survive, they may occupy the same hex as the transport, or any adjacent hex to represent them scattering. Normal stacking rules apply.

8.3 Unloading

To unload a troop transport, the vehicle must be stationary for the time, and then all the contained troops may simply disband, observing all normal stacking rules.

Note that their is no additional MP cost for entering or leaving a troop transport.

8.4 Transport Units

8.4.1 Mercenary Transports

Green Buffalo (all) - 6 Type I
Truck - Infantry

8.4.2 Strahl Transports

Kraftwagen - Infantry
N.Rocker Troop Carrier - 8 Type I

9.0

Infantry Heavy Weapon Upgrades

S.F.3.D. II supplies regular infantry and a Heavy Machinegun counter to improve their offensive punch. How about some more?

Weapon	Damage	VP	Note
Missile Launcher	10 R 8	2	6 shots
Mortar	8 M 6	2	Indirect fire only, does spillover damage
Panzerfaust	10 PF 4	2	10 shots, may fire twice per turn

Mortars can be used by both sides, Aussies get missiles, Germans get Panzerfausts.

10.0

LOS and Units

Units, whether they are friendly or enemy, do not block LOS.

11.0

Aircraft (and Other Unit) Pods

Some units (excluding infantry) can carry pods (such as EW pods, or additional weapons). A pod carried by an aircraft replaces its ability to carry extra weapon counters. Class II or IV Ground units can carry one of them freely. Only specially built Class I suits can mount them. As before, aircraft must declare airborne or ground combat EW.

The AMU is a very large mine that can be carried and dropped by a Neuspotter, it explodes in the next Mutual Fire Phase. Capacity is in terms of an aircraft's normal extra weapon load.

Payload type	VP	Capacity	Effect
ECM/Jamming pod	4	1	4 power units, ECM:3 Jam:3
Spot/Target pod	2	1	Spot:2, Target: +3
ECM pod	2	0.5	ECM 3 only
Jamming pod	2	0.5	Jamming 3 only
Bomb	0.5	0.5	Attack Strength 8
Large Bomb	1	1	Attack Strength 12
Small Missile	1	0.5	Attack Strength 8, range 10
Missile	2	1	Attack Strength 12, range 10
Laser	3	1	10 L 10, +1 to dogfight level
Neuspotter AMU	2	-	Attack Strength 20 in target hex, 10 in adjacent

The EW rules mentioned above can be found here.

12.0

Electronic Warfare and Fire Control Upgrades

These are extra abilities that can be bought for units at an additional victory point cost. Like the EW rules, they add an extra dimension but at the cost of more complexity.

VP	Upgrade
+2	Radar/Radio Direction Finder

This allows a unit to locate functioning Anti-aircraft, Headquarters, ECM/Jamming, Remote Controller, Point Defence and Counter-battery units. Instead of making an attack, it may attempt to electronically spot one unit. The spotting player must choose one of the above types to spot and declare which unit is making the attempt. The opposing player counts the range to the spotter, divides by ten (round up) and tells the spotting player what the number is, and he must roll over that number on 1 die. Spotter gets a +1 for each additional spotting unit and +1 if the target is stationary. Once a unit is spotted, its identity is known for the rest of the game.

+2 Counter-Battery Radar

Detects source location of artillery fire aimed at hex within 40 hexes of the CB radar unit during spotting phase. On following turn, owning player can direct artillery fire at enemy guns. This can get really complicated, see the Artillery Duel rules below [coming soon - Francis]. Can also pass location to friendly aircraft.

+1 Anti-Aircraft

No Ground vs Air penalty. Can be added to Laser, MG or Rocket armed Class I,II and IV units.

+3 Point Defence

The PD upgrade is not an upgrade as such, but the addition of a self contained turret mounted on the upper deck of the vehicle to give it a large arc of fire. It contains its own laser, search radar and fire control system, and only needs power from the mounting vehicle. It will automatically attack any rocket/artillery projectile aimed at the vehicle. It may be used to block rockets, missiles, panzerfausts, bombs and artillery.

When the vehicle is attacked, roll 1d6 for each attack. Bombs and rockets are destroyed on a 1-5, missiles and panzerfausts a 1-4. For artillery, roll 1d6. On a 1-3, subtract 1 from the Strength of artillery, on a 4-5 subtract 2, and on a 6 subtract 3. If the artillery strength is reduced to zero then it totally blocked.

The PD unit has a range of 6 hexes and may attempt to block one artillery attack OR any number of projectile attacks. Attacks fired during overrun or from adjacent hexes may NEVER be blocked (not enough tracking time). Units with multiple PD systems may not roll twice against the same projectile attack, but can defend against the same or multiple artillery attacks.

The PD may not be used in forest or city/building hexes, and a vehicle may only carry one system per hits rating.

13.0

Electronic Warfare

With the increase in SDR automated units, and armies reliance on modern technology for targeting systems and the like as a whole, combat is getting more and more lethal, and for the troops on the ground, there doesn't seem too much of a way to break this deadlock.

As a result, new ways are being developed to try and get the balance back into force for one side, and one way of doing this is to get more electronic warfare vehicles back onto the front line.

Electronic warfare, at its simplest, is the use of jammers and counter-jammers filling the air so that one sides reliance on their modern technology is shattered. Then the EW side can then mop up the enemy as their targeting systems will still be working fine.

At least this is the theory, in practise the other side is going to be doing the same thing and not wishing to let you overrun their targeting systems when they can overrun yours!

13.1 Terms

EW

Electronic Warfare. For the purposes of this article, EW is any of the actions that are described later, and a EW vehicle is simply one that can employ EW. A Neuspotter is an EW vehicle.

ECM

Electronic Counter measures. For the purposes of this, ECM also includes ECCM (Electronic Counter-Counter measures), the art of trying to break through an opponents ECM.

Jamming

Jamming is a very specific form of ECM which tries to disrupt automated units only. ECM will not affect automated anymore than it will affect normal units, and jamming has no effect on ECM.

For the purposes of this article, a ground unit includes any surface naval vessel.

13.2 EW Actions

There are several abilities which an EW vehicle may use, which include the following:

Spotting

This is when a unit with LOS to several enemy units sends this information to other units so that the enemy may be attacked by indirect fire.

Targeting

This allows the EW unit to effectively 'paint' the targeted unit, which means that the EW unit is getting as much information about the enemy as possibly and as accurately, which it then sends to another unit so that that the firer may have a much improved chance of hitting.

ECM

An EW vehicle employing ECM is trying to jam every single enemy unit in the area of effect, by submitting the enemy units to as much electronic static and noise as possible. A unit subject to ECM is trying to break through this ECM and in doing so attempting to subject the other side to its own ECM.

Jamming

Jamming is a much more directed version of ECM. Whereas ECM is trying to blanket everything, jamming is only trying to disrupt automated units (such as Neuspotters and Nutrockers), and attempts to confuse them and put them out of action. Jamming also involves counter-jamming which attempts to break through the jamming and impose its own on the other side.

Every ability will have a rating. For spotting, this will be amount of units that can be spotted in the turn, Targeting has a modifier of what bonus a firer will have on a targeted unit, and with ECM and Jamming this is the rating of the system. In all cases, the higher the number, the better the system.

Not all vehicles will have all the abilities, and most will have them at differing ratings, for example a Neuspotter has Spotting (2) and Targeting (+3).

13.3 EW In Use

EW adds a new phase to the game turn - the Electronic Warfare phase. This is placed after the Mutual Air Commitment phase, and before the Dogfight Resolution phase.

During this phase, both sides secretly declare what EW units will employ ECM and which will employ Jamming (if they have any units that are capable of doing this). Aircraft with EW pods must declare if they are going to be using them for ground attack or dogfighting missions.

Note that more than one vehicle on each side may declare ECM or Jamming, but only the highest rating vehicle will take effect here. No vehicle has to declare ECM if they chose not to employ it.

Spotting and Targeting do not have to be declared now.

Once done, both sides declare their ECM and Jamming ratings, and then they compare each others scores. The highest side has the lower rating subtracted and the modified result is the Active ECM and Jamming ratings. The side with the higher ECM is called the Active ECM side (or Jamming side because they may be different).

For example, an SDR force declares an ECM of 2, and a Jamming of 0. The Mercs declare an ECM of 3 and a Jamming of 3. The end result is the Mercs are the active ECM side with an active ECM of 1, they are also the active Jamming side with an active Jamming of 3.

It is possible for there to be no active ECM or jamming side, and for there to be an active ECM or jamming rating of 0. This just means that both sides EW facilities are powerful enough to be able to burn through the oppositions EW, but aren't powerful enough to actually take advantage of this.

Unless an EW unit has more than one attack, if it uses an EW action, then it may not conduct an attack. If a unit does have more than one attack, then each EW action it uses counts as one of it's attacks. This applies to overrun combat too, and a unit that defends or attacks in overrun will lose any ECM or Jamming that it currently has active. A unit that gets engaged in overrun combat may elect not to return fire, in which case it will get no attacks back at the attacker, but will keep its EW running if it survives.

The exception to this is physical combat. A unit may engage in physical combat and be engaged in physical combat with no penalties.

A unit never has to use all of it's ECM or Jamming ability, but when the rating of the unit is declared, that value is fixed for the turn.

Also, a unit that is declaring ECM or Jamming may declare that it is only being used in the countering role. In this case, the declarations are made as normal, but if the countering side wins, the active ECM or Jamming rating will be 0.

13.3.1 Destroying a Unit That is Generating ECM or Jamming

There is a way to break this ECM or jamming in a turn. If the EW vehicle moves and then gets destroyed in Opportunity Fire, or if the unit is destroyed in Overrun combat, then the ECM (or jamming) generated by that unit is lost. This means that the next highest rating ECM or Jamming vehicle (if active [which is declared in the new Electronic Warfare phase, remember]) will take over the role, but unless its rating is exactly the same as the lost unit, then the active ECM (or jamming) side and active ECM (jamming) modifier will have to be recalculated.

13.3.2 ECM and Jamming Range

Whilst there is a range for everything, when it comes to EW, the range is sufficient that it will cover the entire map. Thus no unit on the non-active EW side is safe from the effects of ECM or Jamming.

It is also worth noting that ECM and jamming are not effected by LOS, and a unit cannot 'hide' from these weapons. The only defence is to destroy the EW vehicle, or to have a greater EW strength.

13.3.3 ECM

The active ECM modifier is used as a negative modifier to all opposing forces to-hit rolls and targeting modifiers, making it harder for them to hit their targets, and reducing the targeting abilities of EW craft.

This modifier will be in effect for the entire turn, unless the unit gets destroyed as stated above.

13.3.4 Jamming

Jamming is similar to ECM, although it is only used against automated units. The active jamming modifier is applied to all combat rolls made by the unit (use the higher of active ECM and active

jamming if both are in effect), but it is also applied as a modifier against the jammed units movement rate. This simulates the fact that the automated unit is getting confused and is constantly re-evaluating the situation.

There is also another effect. At the end of the turn where jamming is in effect, any units that have been jammed that turn must roll 1d6, with a + modifier of the active Jamming.

On a 6+, that unit will be shocked next turn, and thus will not be able to move or fire in the turn.

This shocking will happen regardless of whether there is any jamming next turn.

At the end of the next turn, all shocked units will become active again, although if there is any opposing jamming, then all units will have to roll for shock again.

13.3.5 Spotting

A unit with this ability has the capacity to act as a spotter for other units to be able to use indirect fire. It may spot as many units as it has LOS for and has a rating for, so a Neuspotter may spot 2 units.

13.3.6 Targeting

An EW vehicle with this ability is using all of its sensors to track a target very accurately. This information is then sent to all other units on the EW vehicles side, and they may then fire on the targeted vehicle with the rating of the targeting ability, which is reduced by any active ECM if the opposing side is the active ECM side.

Only one unit may be targeted by an EW vehicle per turn.

13.4 Aircraft

Aircraft may also employ EW. Instead of carrying an extra weapon counter, they may carry an EW counter (which you'll have to make yourself I'm afraid). Some examples of these counters include:

Spotting (2)
Targeting (+3)
ECM (1, 2 or 3)
Jamming (1, 2 or 3)

An aircraft's use of EW will depend on it's mission.

13.4.1 Observation Missions

In these missions, an aircraft may employ Spotting and Targeting EW only.

13.4.2 Ground Attack Missions

These missions allow an aircraft to use all EW functions. However, ECM may only be used to affect ground targets and other aircraft flying ground attack missions. It will never effect dogfighting vehicles, even if they are currently being employed to engage ground attack aircraft.

Aircraft involved in ground attack missions may have EW employed against them. They are susceptible to ECM and they may be Targeted as normal.

13.4.3 Dogfight Missions

Aircraft in dogfighting have very little EW options. All they can do is to employ ECM and jamming against the opposing dogfighters.

When using ECM or Jamming in dogfighting, the active EW side get to use the active ECM (or Jamming) as a bonus to their dogfight rating. For example, an SDR flight with a dogfight rating of 2 and an ECM rating of 2 goes up against some Mercs with a dogfight rating of 3 and no ECM. The totals are that the SDR flight have a dogfight rating of 4, while the Mercs still have still a rating of 3.

The craft that are using the ECM do not add their dogfight rating to the combat, but they can be taken as casualties if so desired.

If an opposing aircraft is effected by Jamming and is shocked, then it will crash and burn on the following turn if it has to roll again to see if it is still shocked. An automated aircraft can only survive one consecutive turn in the air shocked.

Dogfighting EW will not effect ground attack aircraft, nor ground units.

13.5 Naval EW

EW used in the seas works exactly as it done on land, and surface or undeasea units are treated as ground units for this purpose. EW operating from a surface or ground unit will effect units that are underwater, and vice versa.

The only exception is when it comes to units that are in deep water. An EW unit in deep water will only effect other units in deep water and will not be able to effect other undersea or surface craft. The reverse is also true.

13.6 Availability of EW Vehicles

EW vehicles are never as common as their commanders would like them to be. As a result, generally only one EW vehicle is ever assigned to a single platoon. For walkers, this is usually one SAFS Racoon or PKA Konrad per 12 or so armoured suits, and usually the EW vehicle is also the commanders vehicle.

Other EW vehicles (such the HEWS Janus) are assigned as and when deemed necessary, as is the case with aircraft EW pods.

The exception to this are the Neuspotters and KrachenVogel which are spread all over, and (especially with the Neuspotters) are used whenever possible.

For the units listed below, 'S' = Spotting, 'T' = Targeting, 'E' = ECM, and 'J' = Jamming.

13.6.1 Mercenary EW Units

Raccoon - S(2), T(+3), E(2)

13.6.2 Strahl EW Units

NeuSpotter (Ns465) - S(2), T(+3)
NeuSpotter (Ns466) - E(2), J(2)
NeuWasser - S(2), T(+3)
Krachen Vogel (all) - S(2), T(+3)
Konrad - S(2), T(+3), E(2)

13.7 Optional EW Rules

Instead of giving each unit a set rating of ECM and Jamming, units have a power unit rating. This should be 75% of the combined total of the units ECM and Jamming (thus a HAFS Janus with an ECM 3 and Jamming 3 would have 4 power units).

These power units can then be split between the two sources of EW as the owner wishes which would give more tactical options as you would have to decide which is more important - ECM or Jamming? After all, with the rules as they stand, there is no reason to ever not give all of the rating to the enemy.

Units that only have the one ability will simply use that ability at it's listed strength and not take a reduction, but this can be balanced by the fact that the units with the power units have no maximum value that can be allocated to any specific ability.

14.0

Naval Rules

With the war spiralling into a global conflict, it was inevitable that there would be fighting across most of the surface of the planet, and one huge battlefield just waiting to happen, is, naturally enough, the ocean.

These rules are an incomplete work in progress, and any comments, suggestions or feedback would be graciously received.

Also, at the moment, I haven't included any stats for the naval vessels, but rest assured, these are coming shortly!

Ocean going vessels are slightly different to their 20th Century cousins. Boats employ much more powerful hover engines, and such don't need to worry about drafts and how deep the water has to be before they get stuck. Whilst powerful, the crafts engines and size do not permit them to be land based, and thus cannot be used as land ships.

14.1 Movement

Whilst normal hovercraft may struggle to cross the worlds oceans, there are two other types of movement that allow almost free rein across the water. There are represented by the movement codes of 'S' (for surface ship), and 'U' (for undersea vessel).

These two new codes may only travel on or under the waves, and use the following terrain effects chart.

	Movement Class			**Weapon Type**					
Terrain	**S**	**U**	**H**	**L**	**R**	**PF**	**MG**	**T**	**Blocking Terrain**
Shallow water	1	(1)*	3	-	-	-	-	-	-
Above sea	1	1	3	-	-	-	-	-	-
Undersea	x	1	x	-2	-2	-2	-2	-	Yes, see torpedoes

(1)* - denotes that it costs 1 MP per hex, but the unit can only travel in this terrain when surfaced.

Shallow water is anything that isn't very deep, probably around man height, or about 2 metres or less. No unit may submerge in shallow seas.

Above sea is the standard terrain for most of the worlds oceans and lakes. It is deep enough for units to submerge in.

Undersea is for those units that can submerge, and represents their ability to dive.

The weapon code **T** is for torpedoes, see later.

Movement is basically handled as normal, although there aren't many different types of terrain to have to worry about.

14.1.1 Islands

Islands are probably the only terrain that will effect naval vessels. These will block terrain and thus naval vessels will have to go round. The island will effect LOS as normal terrain would.

14.1.2 Landings

Some units will be able to land (mainly the armoured suit variants), and provided the suit has enough MP to be able to enter a land based hex, they may do so as they wish, with no additional penalties. Of course, the land will have to be at sea level for the unit to be able to land.

14.1.3 Submerging

Some units have the ability to operate underwater. These units are either underwater or on top, and it costs +1 MP to surface or dive, although the only other restriction is that a unit may not be submerged when entering shallow water.

14.2 Combat

Again, for the most part, combat on or under the seas is basically as normal.

14.2.1 Surface Combat

Units that are the surface shoot each other as normal. Unless there are islands or coastal areas present, they will be almost no blocking terrain save for the units themselves.

14.2.2 Undersea Combat

Combat under the waves, however, is a little different. Water is considered blocking terrain, although no spotter is needed. It does mean that indirect fire is not possible, and unless the unit is firing a laser or torpedo, an attacker will only be only be able to fire at an undersea unit that is one hex away or surfaced.

Any vessel that is currently under the waves treats every hex between it and every other unit as underwater.

14.2.3 Hovercraft

Whilst hovercraft may travel and fight on the water, they are slightly more vulnerable than normal vessels. Any immobilisation result is effectively treated as a destroyed hit, as a hovercraft cannot stop on water without sinking, and a sunken unit that is not equipped for undersea operations is a dead unit.

14.2.4 Torpedoes

Any sea going vessel or aircraft may mount torpedoes instead of normal rockets. The torpedoes will have the same statistics as normal rockets, but they can't be fired at any unit other than

an undersea or ocean going vessel. They have a weapon code of 'T'.

Against surface vessels, these function as normal rockets. Against undersea units, water doesn't block LOS, and thus torpedoes will effectively function as normal rockets.

Being treated as rockets does mean that a unit hit will get the +1 to the armour resistance chart roll.

14.2.5 Mines

Mines are another hazard that surface and undersea vessels face. Any unit that enters a hex which contains a mine must make a normal to hit roll, with a basic target of 7, with a modifier of + the size of the unit.

So a size II patrol boat entering a mined hex, gets hit on a roll of 9 or less on 2D6. If the unit is hit, then it must take a normal roll on the armour resistance chart.

Unless placed in deep water, a mine will not effect deep water units, and deep water mines will not effect normal undersea or surface vessels.

Laying mines is easy. A unit that carries them may lay one counter per turn per firing action.

14.3 Deep Water

Sometimes a unit wants to get deeper than normal undersea operations, and in this case, it may get go to what is classified as deep water.

Deep water is much deeper than normal undersea, and thus may not be available in all scenarios. This, like shallow water, should be decided before the game begins.

Getting to deep water costs a +1 MP to enter, and once there, all normal undersea rules apply, with the additional combat notes.

A unit in deep water may target units in deep water with no additional penalties. Deep water units may attack units in normal undersea or on the surface with normal range penalties, and an additional -2 modifier. Surface units target deep water units at the same penalties, but as deep water and undersea blocks terrain, a unit may only attack with lasers and torpedoes, not MG, PF or R weapons.

14.3 Storms

Storms are a hazard to naval units, and indeed any unit that crosses the waves. For the purposes of these rules, storms are handled very abstractly.

There are two types of storms, light and major, and these should be decided upon before a scenario. Storms generally take some time to brew, and there are always warnings that the various forces can sense (visually and electronically, although if the unit is currently being jammed, then this option could be out), so forces should usually be given the option to avoid those areas if at all possible, which of course it may not be.

14.3.1 Light Storms

Light storms are not a major hindrance to vessels, more of an annoyance. All surface units lose 1 MP from their movement automatically. This is lost before the unit moves. In addition, all size I and II units on the surface, and all flying units most roll 1d6 in the initiative phase. On a roll of 6, that unit takes an automatic roll on the armour resistance chart, with all units that would be automatically destroyed (such as the Neuspotter) rolling on the 'C' column. All combat rolls have a an additional -1 to the roll.

Underwater vessels are not effected at all.

14.3.2 Major Storms

Major storms are not generally travelled in lightly. All surface vessels of size IV lose 2 MP. All other vessels lose half their MP (round up), and must make a 1d6 roll in the initiative phase. On a 3+, then that unit must roll on the armour resistance chart. Aircraft roll directly on the armour resistance chart.

Underwater vessels suffer the same ill effects as a light storm, while deep water units suffer no effects.

15.0

Optional Rules

The following section presents some rules as potential alternatives to rules introduced in the TCI edition.

15.1 New Combat Rules

The regular combat rules in S.F.3.D. are too cumbersome and requires two die rolls for every shot. The new table below is inspired by Ogre/GEV's CRT, while the alternate ranges used above are based on Battletech. They are intended to simplify and speed game play. They have only been playtested a little, I'm still refining them.

Take the attacking unit's strength at that range band and apply the usual modifiers (Indirect fire, target immobile, Ground vs Air, ECM etc) and compare to defender's strength to generate a ratio. Round in favour of the defender.

Example: a strength 12 attack vs a strength 5 defence is a 2-1 attack ratio.

Find the column for that ratio on the table below and roll one die with the following cumulative modifiers: Class A: -1, Class B: 0, Class C: +1 and Rocket attack: -1.

	Attack to Defense Ratio					
Roll	**1-2**	**1-1**	**2-1**	**3-1**	**4-1**	**5-1 or better**
1	NE	NE	NE	A	M	X
2	NE	NE	A	M	X	X
3	NE	A	M	X	X	X
4	A	M	X	X	X	X
5	M	X	X	X	X	X
6	X	X	X	X	X	X

NE = No effect, A= Armament disabled, M= Immobilised, X= Destroyed

I have placed "M" as being worse than "A" results because an "M" results destroys aircraft in flight and immobilised units are easy targets, especially for artillery.

Initial playtesting shows that between comparable units (say a Ravin versus Pzkfw 182) that combat at Medium range gives you a good chance to survive, but Short range combat is bloody as hell.

One optional rule to further add is that units in Strongpoints use the modifier not on the attacker's strength before generating the ratio but on the CRT instead! This gives fortified positions a much better chance of surviving and really makes them something to take seriously. Yes, a Green Buffalo in a Strongpoint would be very difficult to take out, but:

A. It's realistic.

B. That's what artillery is for: stationary targets...

15.1.1 Alternate Spillover Attack Strength

Use half the attack strength, rather than reducing it by -2. It makes better sense with these rules.

15.2 Alternate Fighter Ground Combat Attack

Instead of placing a fighter counter over the target hex and ignoring range penalties, use the following: the fighter places his fighters on the map anywhere he chooses. Air to Ground and Ground to Air fire is the conducted normally (ground units still get the -2 penalty). The only time the fighter must be placed over the target hex is for bombing runs. Missiles can be fired as ranged combat.

15.3 Sphinx and Dollhouse Rockets

Most rockets in the game lose attack strength as the range increases, just like lasers and other weapons. The Sphinx and (I assume) Dollhouse rockets go UP in strength. I'm assuming that most rockets are short ranged and unsophisticated, but the Sphinx/Dollhouse (S/D) rounds are larger, accurate long-range missiles. S/D rounds can be fired as Direct fire, Indirect fire, and as offboard artillery. S/D rounds fired as offboard artillery can scatter and all targets in the scattered hex take a spillover attack (the round was a miss, so no unit takes a direct hit). Use the original rules for Artillery and Observation level to determine to hit number and roll two dice.

15.4 Alternate Ammunition Types

Most of these are for Artillery, but some are for others, such as Guns and Rockets

Anti-tank rounds

Give extra +1 on my CRT table [above] (but -1 versus Infantry). AT rockets are +0 then. Can be used for Rockets, Guns, Panzerfausts, Missiles. No spillover fire. Extra 2 VP per unit armed with AT rounds.

FASCAM (Field Artillery SCatterable Mines)

Give extra +1 on my CRT table [above] (but -1 versus Infantry). AT rockets are +0 then. Can be used for Rockets, Guns, Panzerfausts, Missiles. No spillover fire. Extra 2 VP per unit armed with AT rounds.

Smoke

Lasts for two rounds in target hex, one round in adjacent hexes. Artillery only.

Incendiary

Normal damage to Infantry, 1/2 damage to class I+ units, automatically sets fire in all affected hexes. Artillery, Mortar, Bombs only. Normal cost.

CBM (Cluster Bomblet Munition)

Does 1.5 x damage to infantry and units with B or C Armour resistance, half damage to A type units. Artillery & Bombs only. Triple point cost.